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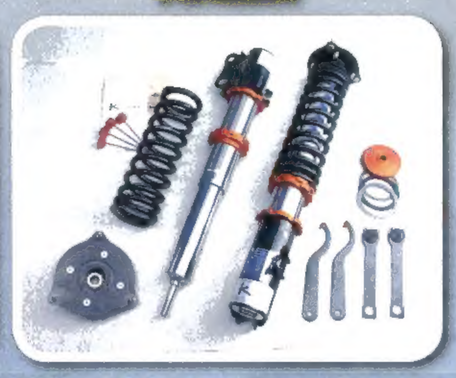

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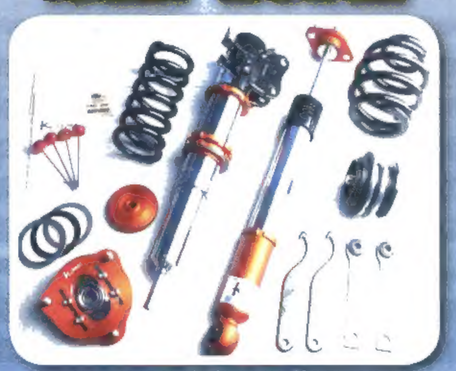

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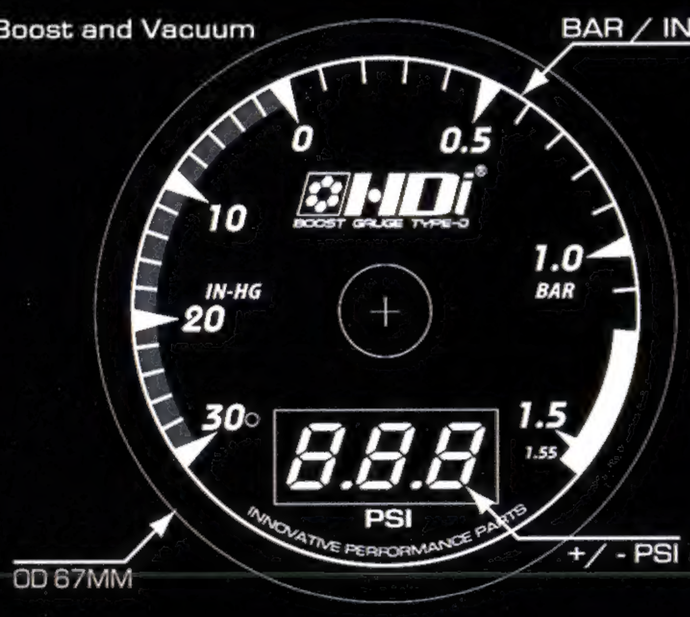

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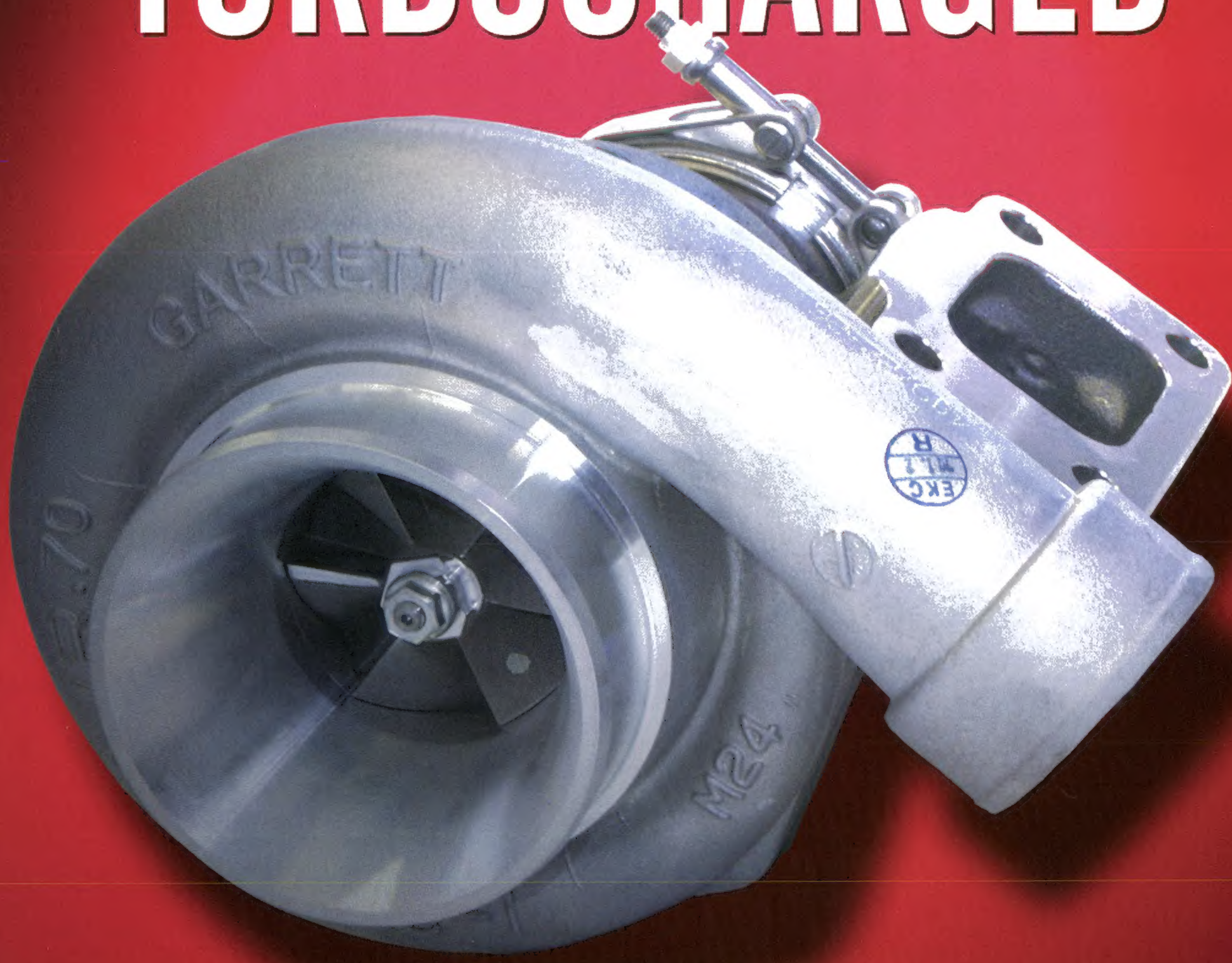

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Improbity

Superb

The World Time Attack Challenge proved it was exactly that – a truly international event

When I first got to Superlap, or the World Time Attack Challenge, over the weekend I headed straight for the roof and spotted the Panspeed RX-7 almost immediately. Such is its brightness, you could probably pick it from Perth, but there it was, in the flesh, taking a corner, and it hit me – this is awesome.

The World Time Attack Challenge proved it was exactly that – a truly international event. I spoke to readers who'd come over from New Zealand and even guys who knew the magazine from Russia. How the hell it got over there I'll never know, but it was great to chat (or 'communicate', rather) in the universal man language that is car.

I've actually had a Post It stuck to my computer tower here in the office dated back in March listing who I thought would take out the event. It reads 1) Cyber Evo, 2) Tilton Evo, 3) Sierra-Sierra Evo, 4) Panspeed RX-7 and 5) the Tomei/Cusco/Voltex WRX. Yes, I know you're asking why the Tilton Evo is in there, but I thought it might be a dark horse considering it took out the last event and had been under significant development.

So, how'd I do? Well, I was worried about the Cyber Evo after it snapped a cam early on, but it came through, placing first. Tilton missed out, but Sierra came home with David Empringham in second, followed by Yamada-san again in the WRX, Luff in the Prep'd Motorsport Elise and the Panspeed RX-7, one place below on my list. So, four out of five not so bad, hey? Never mind the actually placings...

The other classes, Open and Clubsprint, were, dare I say, even more fun to watch. I was upstairs down at the end of the straight watching when some of these battlers were cruising out of the pits. A group of collected bogans next to me actually laughed at the exhaust note of one poor looking Honda, and yes, it did sound like a pack of dying trolls, but when it came around again on full song the next lap taking over built WRXs and Evos, said bogans soon zipped up.

That's the beauty of it all, especially in these more amateur classes. You just don't know what these cars are running, nor how capable they are, until you see them out there.

In fact, the one thing most spectators communicated to me over the two days of the event was just how good it was to see an event with a bit of variety for once, as opposed to a couple of identical V8 Holdens and Fords doing laps. Variety is the spice of life, and on the shelf of events Superlap is fast becoming chilli hot. You've also got to consider that a time was posted in the Sun Cyber Evo faster than the V8 Supercar record for the track, and those guys run on full slicks. Suck that, dinobots!

In all, it was a fantastic event, professionally run and without little incident bar idiot 'media' who decided to jump barriers and generally create havoc for officials. And for those that listed 'Performance Imports' on their media application without our knowledge, we'll be speaking to you soon...

Back to the positives, I also managed to catch up with a lot of the international media at the event, including our very own Dino, who was over with the guys from Speedhunters. The poor guy looked stuffed from traipsing around the circuit all day, but hey, he had a spankers red R35 to drive around in, so he gets no sympathy from me. But really, he's a great guy who's just an import fanboy like you and me at heart.

It also was so cool to see Tarzan out there so calm and collected all day. He posed for countless photos, even pinching someone's compact camera and taking shots of his own cars at one stage for a laugh. It's great to know these celebs are so down to earth in person and happy to catch up with fans.

A big thanks to the hundreds of readers who either came to our stand or picked me out of the crowd. I actually lost my voice on Sunday given my yap was flapping almost non-stop, but it was just so great to hear what you guys are up to, your projects and what you hope to see in the mag in the future (more old-school epic-ness, got it).

I must also send a quick plug out to David Zalstein and his blog Shift Up (www.shiftupblog.wordpress.com) and also the guys at Uber, who had some excellent, affordable titanium products on hand, as well as comp winners Amy and Matthew Stevenson.

We'll have full coverage of the World Time Attack Challenge in an upcoming issue, so keep an eyeball out, but for now it's back to issue 125 and one of my favourite cover cars this year.

Stay tuned,

FOREIGNER OF THE MONTH

TOMMY KAIRA ZZ-II

Formally Tomita Dream Sales, Tommy Kaira has put out some interesting cars over time, including the little-known ZZ-II. The ZZ-II, also known as the ASL (Autobacs) RS-01, is essentially a mid-mounted coupe borrowing an RB26DETT from the Nissan GT-R, but tuned up to 542hp.
The car itself was modelled on European exotics, featuring front and rear diffusers, a roll-cage, as well as six-pot front and four-pot rear brakes.
Weighing in bang on one tonne and with all-wheel drive and six-speed manual, it could run 0–60 in 3.2sec, putting it up there with the supercar elite.
Handling was also decent, thanks to the same aluminium chassis as found in the former TK ZZ.
Pretty hard to find for real, we'd suggest checking it out in Gran Turismo III instead.

PERFORMANCE imports

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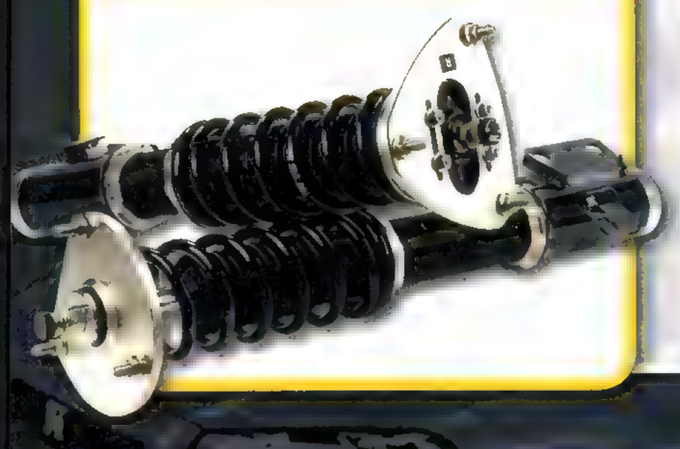

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IMPENDING

SUPER LAPPER

You might have seen these new Rays Engineering Japan TE37 SL (Super Lap) wheels on the time-attack R-Magic FD cover car in issue 123. They're lighter than a standard TE37 thanks to special, and rather dirty-sounding, 'Mold Form Forging' and come in the special-edition gunmetal finish pictured.

As an example of said weight loss, an SL in 18x10.5in loses some 400g over a regular TE37. Expect them to be $3500+ for a regular 18in sizing, with additional sizing from 17x7.5in right up to 18x11in. Oh, and just wait for that sticker to be copied the world over...

Contact your local Rays dealer for more information, or hit up Aussie distributor www.stamfordtyres.com.au.

Forward answers to jason@hpi.com.au

GUESS THE PART

Last month: Vertex gearknob

SMART BOVS

Turbosmart's Kompact Dual Port and Plumb Back are now available with 34mm inlet and outlet ports. This makes them ideally suited for Mitsubishi Evos, Ralliart Colts, the 3000 GTO and Nissan Pulsar GTi-R as well as a host of V8 turbo kit applications. The 34mm Kompact Dual Port is at $249.95 RRP including GST and the Plumb Back at $169.95 RRP including GST.

The new 34mm Kompact Dual Port and Plumb Back are available now from your local Turbosmart dealer. For more information, call 1300 735 506 or go to www.turbosmaronline.com.

TUFF STUFF

Rosstuffbond has released a few interesting products onto the market this month. Their new range of pullies and hubs for the 2JZ Toyotas are made from 7075 aerospace aluminium for strength and anodised for corrosion resistance.

"Another reason we are using 7075 on our pullies is for wear resistance in the pulley grooves, and in special applications we are hard anodising the alloy components," says the team. "We are also using the 7075 for our crankshaft hubs, which are distinctively anodised red. The advantage over steel is they are lighter and by using the alloy mounting onto the crank this prevents galling on the nose of the crankshaft.

"This 2010 range of balancers are made to suit our design that has been approved by the SFI foundation in the USA and are being exported around the world. Our latest designs to be released soon are for the Nissan 350Z engine, Nissan N14 SR20DE FWD, the Nissan GTi-R SR20DET, SR20VE front-wheel drive and two Hondas, the B18C DC2 and Honda K20 DC5."

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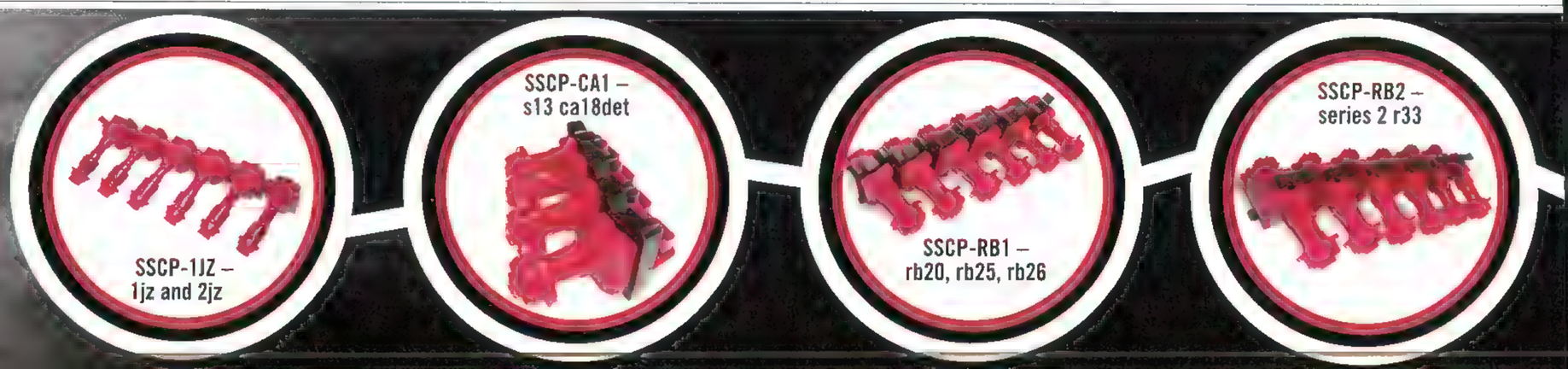


TUNING COMPLEX

If you're in the market for coil-overs, it's hard to go past Racing Logic. Kicking things off is the Ultra Complex, the entry level Racing Logic coil-over with no compromise in its build quality. Of course, you also get warranty and after-sales support in Australia, so there's no need to speak to someone overseas.

Racing Logic coil-overs are also race-proven in Australia with big-name drivers who actually use the product instead of just slapping a sticker to the side of their car.

Says 2009 Drift Australia Champion Luke Fink, "I love the Racing Logic coil-overs. I can run them at a good height, so they're good to daily drive and awesome on the track. That is what I want in a set of coil-overs."

Says Jack Monkhouse, 2009 Evo Nats semi-mod class winner, "I've got a set of Racing Logics in the Evo VIII MR. They are fantastic struts and great value for money. Nice and firm in the hills and on the track. Also, with the softer springs set-up they don't shake your brains out on the street during day-to-day use." And Mark Boxsell, Fastest Evo VI TME at Evo Nats 2008 and 2008/09 winning team of Evo VS STi, says, "I think Racing Logic Ultra Complex series are the best coil-overs on the market for under $2000".

There's also the new Super Tarmac product for the professionals out there looking for fully adjustable racing suspension that is tuned to cater for pro tarmac events such as time attack and hill-climb. The external reservoir design enables the finetuning of bump and rebound separately, which allows drivers to adapt to differing conditions during events.

Find out more about the above and Racing Logic in general by visiting www.racing-logic.com. Pricing for the Ultra Complex is $1795 and $3795 for the Super Tarmac.

BLOCKING TOOL

The new G4 KnockBlock is a powerful tuning tool with digital knock detection for crystal-clear knock identification. You simply connect the G4 KnockBlock to your Link G4 ECU to add individual cylinder, closed loop, knock control. You can purchase the G4 KnockBlock only (includes loom and warning light) or the full tool-kit for the professional tuner.

Features include two knock sensor inputs, high power, low distortion audio output, ANC (active noise cancellation) detection mode, 40MHz digital signal micro-processor, analogue 0V to 5V output for interfacing to a dyno or engine management system, digital time window input for individual cylinder knock control and digital window output for interfacing to Link's G4 ECU among other good bits.

There's more info at Link via www.linkecu.com.

STEAMPUNK

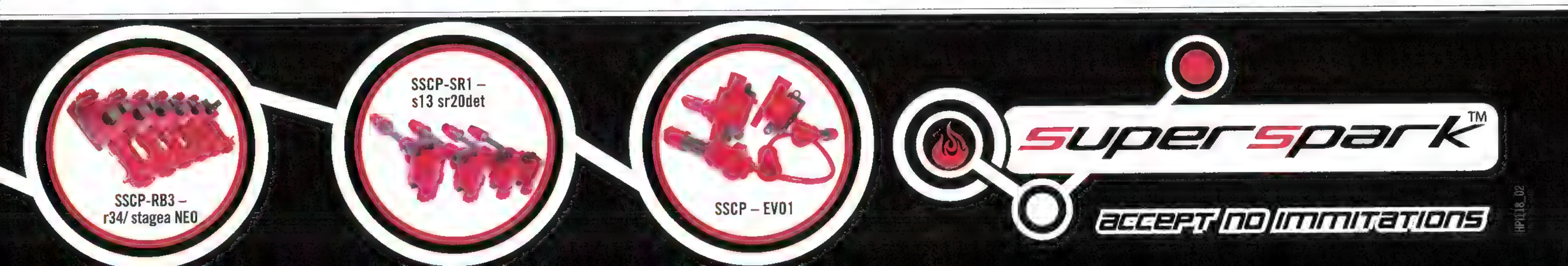
When you're running a standard turbo exhaust manifold on a factory turbo with factory boost and tune, things tend to be pretty swell. When the power is upped substantially, however, well, that's when an aftermarket manifold can really start to benefit.

You see, when chasing higher power or running more boost, the factory exhaust manifold can begin to bottleneck power delivery due to increased back-pressure. Compound this with not having the freedom to switch to a differently flanged turbo, run an external wastegate nor change the mounting point of the turbo and it becomes pretty clear the factory manifold will perform a decent job no longer.

Thankfully Powertune has come to the rescue, offering custom-made exhaust manifolds to suit the Mitsubishi 4G63, Nissan RB, CA or SR engines. Each of these are handcrafted, made-to-order products TIG-welded and built from steam-pipe that come with a full 10-year warranty for peace of mind.

These manifolds can be finished in any flange to suit any turbo, whether that be either single- or twin-scroll applications, the latter including twin-external wastegate set-ups. Ceramic coating can also be arranged for an additional price.

Dependant on application, pricing ranges from $950 to $1200. Dial up (02) 9724 0606 or cruise to www.powertune.com.au for all the info.



PIT FIGHTERS

Motul Performance Motor Oils has commenced a new campaign, travelling to racetracks around Australia to set up the Motul Pit Garage. Offering free oil changes with Motul 6100, 8100 and 300V available for track use, this enables competitors to experience Motul in their own vehicles under race conditions. Most importantly, they allow people to make up their own mind about the advantages of running Motul in their road and circuit cars.

With two qualified technicians on hand in a matter of 10 minutes cars were in and out of the Motul Pit Garage with a fresh change of Motul oil.

"We are taking our Motul Pit Garage to racetracks around the country and will be suppling free changes of oil at the track, so keep an eye out."

Pictured, Lakeside Raceway has been closed to the public for many years, but has recently been reopened, offering quite a challenge to novices and experienced drivers alike. Lakeside is not a circuit to be toyed with, offering less than 10ft of run-off before you come to a complete stop into a guard rail.

Since the re-opening, a number of cars have been written off, maintaining the notoriety and challenge of this historic circuit.

Says Motul, "The Time Attack session was a great day with no incidents and an incredible display of cars, from daily drivers to track only mind-blowing machines. With over 50 cars attending the day, this was a considerable turn-out and displays the continuing growth and popularity of the Time Attack circuit format."

For more information, check out www.timeattack.com.au. For info on Motul products or getting the Motul Pit Garage to your event, contact automarketing@linkint.com.au.

JDM OPTION #43

It's been a while since we reviewed DVDs, but issue #43 of Option International, D1 E-Town is well worth a look for D1-GP fans. It covers the D1-GP exhibition round that was recently held in Englishtown, New Jersey, which was the first time Jap pro drift had ever reached over to the US east coast.

Running for 100 minutes, you'll also find a profile on Cosworth Tuning, IS drifter Chris Forsberg as well as Daijiro Inada running Dai's Drift Academy sidelined by his very impressive Stream 'Z GT Jnr. Hell, Nomuken's chit-chat with champ driver Vaughn Gitten Junior is worth the price of admission alone.

Of course, there are the usual crash footage and extras, and you can pick up your own copy for $36.95 from distributor Serious Business via www.seriousbiz.com.au.

BIG BIKKIES

Sometimes it's interesting to keep an eye on the financial side of the car industry, and Nissan Motor Co Ltd recently posted its 2009 fiscal year results.

While the company's net revenue of 7.5173 trillion yen sounds impressive, this was down 10.9 percent from the year prior, with the stronger yen offsetting the increase in sales volume. Operating profit was 311.6 billion yen (3.7-odd billion AUD).

"Fiscal year 2009 was an extremely challenging year. Within Nissan, we kept our focus on recovery, guided by our company's recovery plan," said Nissan President and CEO Carlos Ghosn. "Though we are still operating in crisis mode, Nissan is well on track toward complete recovery without any compromise to our strategic priorities."

If you want some more boggling numbers, consider that Nissan sold

some 3,515,000 vehicles worldwide in the 2009 fiscal year, which was a three-percent increase, with sales up 2.9 percent in Japan, but down in other markets, including the US and Europe. Sales in China increased by a monster 38.7 percent.

New models released in 2009 included the 370Z Roadster, NV200 Vanette, Fuga, Roox, PIXO, Patrol and March. Given all this, it will be interesting to see how auto companies fair come 2010's results.

INSURANCE 101

JUST·CAR INSURANCE

Words: Ying

I must admit, when I was approached to write an article about insurance for Performance Imports I was a little hesitant. Let's be honest now, insurance isn't exactly the most exciting subject in the world. Fortunately, I have a unique perspective because although I work for a car insurance company, I live and breathe cars, just like you.

If you're one of the lucky few, you'll pay for your insurance and forget about it. Unfortunately accidents do happen and sometimes people take things that don't belong to them, including your car.

I had a chat with my car friends to ask them what they would want an article to be about on insurance. So here it is. No preaching, nor corporate jargon, just some helpful facts that you should know.

WHY SHOULD I HAVE INSURANCE? I'M A SAFE DRIVER

Insurance is about protection – plain and simple. You may be the safest driver in the world, however you can't control what other drivers do out on the road, or what Mother Nature might get up to for that matter. Insurance gives you peace of mind that your pride and joy is properly protected. If you're into cars – like me – you've probably invested a lot of time and money on it, so protecting it just makes good sense.

Let me give you some examples of what a typical comprehensive car insurance policy, such as Just Car's, would cover:

- **Hitting an animal**
- **Hail/flood damage**
- **Car stolen**
- **Car accident**
- **Car accident with someone who hasn't been as smart as you and doesn't have insurance**
- **Vandalism**

So, the question now is; why wouldn't you take out insurance?

SHOULD I TELL THE INSURANCE COMPANY ABOUT ALL MY MODS AND MY DRIVING HISTORY?

All I have to say is, don't risk learning the hard and costly way – being upfront with your insurer from the get go means you won't have to worry about a claim possibly being reduced or, worse, not paid at all.

Not answering the insurance company's questions honestly when you purchase your policy, or not telling them about the things they ask you to tell them about during the policy period, opens you up to your claim not being covered. If you're at fault, that will mean you may need to fork out the costs not only for the repairs to your car, but for any other damage you've caused to other cars or other people's property.

There's no point paying for insurance if you're not going to be covered for a claim, so make sure you tell your insurer what they need to know – that way they can tell you whether they can offer you insurance and if so under what conditions.

At Just Car, we don't judge, we understand cars and we understand that nobody's perfect, so being upfront makes it easier for us to look after you and your car the way you would expect us to in case of an accident.

WHY ARE IMPORTS AND MODIFIED CARS MORE EXPENSIVE TO INSURE?

Imports, modified and high performance cars are often more expensive to insure as the cost of repairs is usually higher than for standard cars or cars sold locally when new. However, your premium isn't just determined by the car you drive. Factors such as your driving history, age, whether you own your car outright, use it for private or business purposes and where you keep it overnight can all play a factor in determining the price of your insurance.

When you buy comprehensive insurance, it's important to remember that what you're paying for is not just to have your car covered. For instance, Just Car also provides up to $20,000,000 in legal liability cover (that's cover for damage to other people's property) should you have an 'at fault' claim. Now that might sound high, but trust me, it would come in handy if that 'other property' was a Ferrari, a traffic light or a shop front – and it does happen.

If you do find it difficult to come up with a 12 month lump sum payment for your comprehensive premium once a year (and let's face it, your car renewal is often due at the same time as your rego) there may be other options available. For example, at Just Car I've been able to reduce some customers' premium amounts by offering them a higher excess on their policy. Just Car also offers customers the ability to pay their premium month by month, by direct debit - so lots of choices are available.

If you haven't bought your car yet, do your homework, and then the insurance premium won't be a surprise for you. Just Car provides an online quoting service that's accessible 24/7 – and there are no restrictions to the number of quotes you can get. Because we specialise in providing insurance for drivers of imported, high performance and modified cars, our quoting system let's you see for yourself the impact on the insurance premium if you turbo charge your car or change its engine specs, or what a quote would be like on a Civic compared to a Skyline.

IF I SPEND MONEY DOING MY CAR UP WHAT TYPE OF VALUE DO I GET BACK IF IT'S WRITTEN OFF?

We can offer you an 'agreed value' when you buy a Just Car comprehensive car insurance policy. This means that we let you know upfront what we are willing to insure your car for and lock that value in for 12 months.

If you've modified your car, like, added accessories, upgraded the wheels, or dropped in a new sound system, we will offer you an agreed value that reflects the fair value of your modified car. If your car has only done low kilometres and you have your service books, this can also add to the value an insurance company may be prepared to insure your car for. In any case, with an agreed value policy, you will always know what you will be paid out in the unfortunate event that your car is written off.

NEED MORE INFORMATION?

I could go on and on about the benefits of insurance, but the bottom line is make sure you know your stuff when it comes to your insurance policy. Claim time is not the best time to find out that you are not covered for what you thought you paid for – read all of the paperwork and, most importantly, ask your insurance company questions to ensure that you understand the level of cover your hard earned cash has paid for.

WWW.JUSTCARINSURANCE.COM.AU

Because I work for Just Car, here's the legal bit I need to tell you about – Just Car Insurance Agency Pty Ltd (Just Car) is an authorised representative of Australian Associated Motor Insurers Ltd (AAMI – AFSL 238173), who is the issuer of the insurance. In writing this piece, I haven't taken into account your specific needs or financial situation, so before contacting Just Car, you should read their PDS for the Just Car product you're interested in – view a copy online at justcarinsurance.com.au or call them on 13 13 26 for a free copy

JUN
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ADVAN

Formally the JUN Akira Supra, behold the 800hp time-attack resurrection

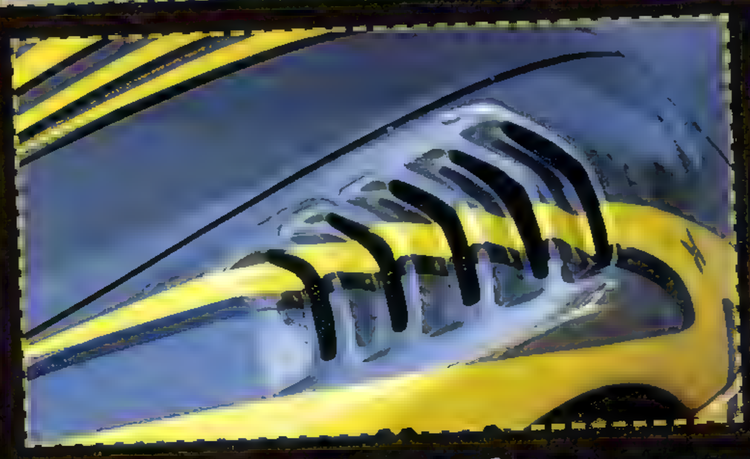
Prodigal GUN

It may have lost 500hp since its Bonneville top-speed days, but this Supra is still a heavyweight thanks to its 3.2L and 800hp

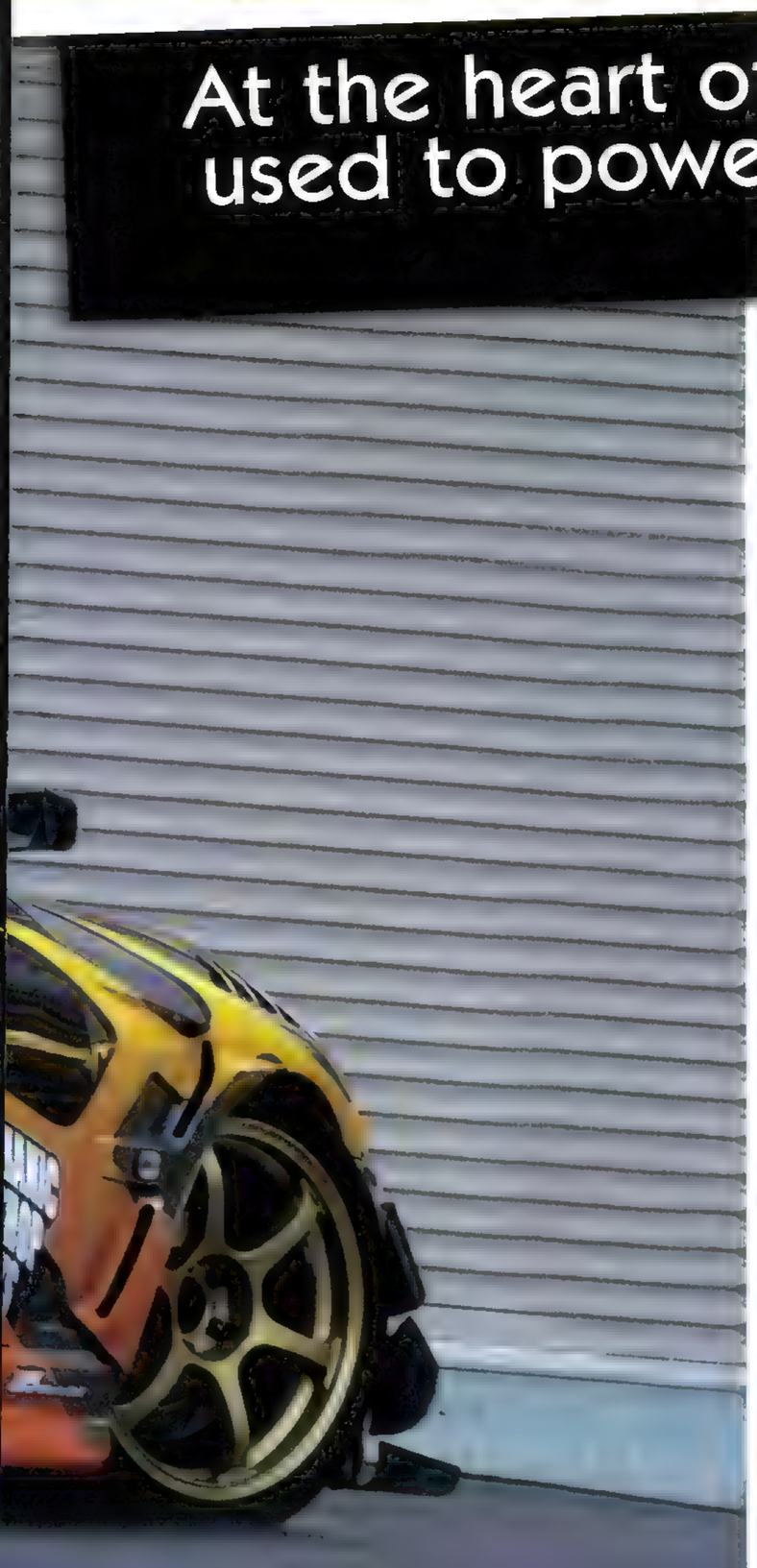
The JUN 3.2L kit utilises forged pistons manufactured by Cosworth

To give a more modern feel to the car, JUN has stepped away from its usual yellow and green livery and has gone with a sand metallic grey topped off with new orange graphics

The Supra is yet to be tuned, so wasn't running its best on the day, but the potential was apparent



At the heart of the car it is still the same 2JZ-GTE that used to power the Bonneville car, freshly rebuilt with a full JUN 3.2L stroker kit



JUN is back on an offensive for 2010. With the world taking an ever-increasing interest in time attack, they have just completed an extensive rebuild of one of their most legendary machines. Sporting an all-new livery and a more focused performance package, the old 'Akira Supra' is back with a vengeance. Enter the JUN Supra Reloaded.

To see what this welcome contender in the Japanese time-attack scene is packing, we met up with Watanabe-san of JUN literally days after the rebuilt engine was dropped into the chassis. After months in the engine build room, the 2JZ has been tuned for a smoother power delivery, ready to impress those sceptics that believe the JZA80 isn't really cut out for lap-time shootouts.

The original version of this car was built under the direction of Koyama-san back in 2000 as a fast street/circuit car. It managed to lap Tsukuba in just over one minute, a very impressive result for the time.

It was a year later that the car went through its first makeover when it was transformed into the JUN Akira Supra ready to hit the speed trials in Bonneville. It packed a monster 1300hp 2JZ boosted by twin T78 turbos and a bespoke set of aerodynamic parts to help it penetrate the air more efficiently. They were out to beat their own record of 419.4km/h, set 10 years prior with their Z32 300ZX, but were unable to do so, managing a close 401.20km/h run.

After the failed attempt, the Supra was put away for a long time, coming out for the occasional show or exhibition – until early this year, when the car was put through its second transformation and brought back to life with an all-new purpose.

Joining the GRB Impreza demo car, the Supra will be doing the rounds at time-attack events later on in the year. The guys at JUN must have realised that letting such a special car go to waste would have been a real shame.

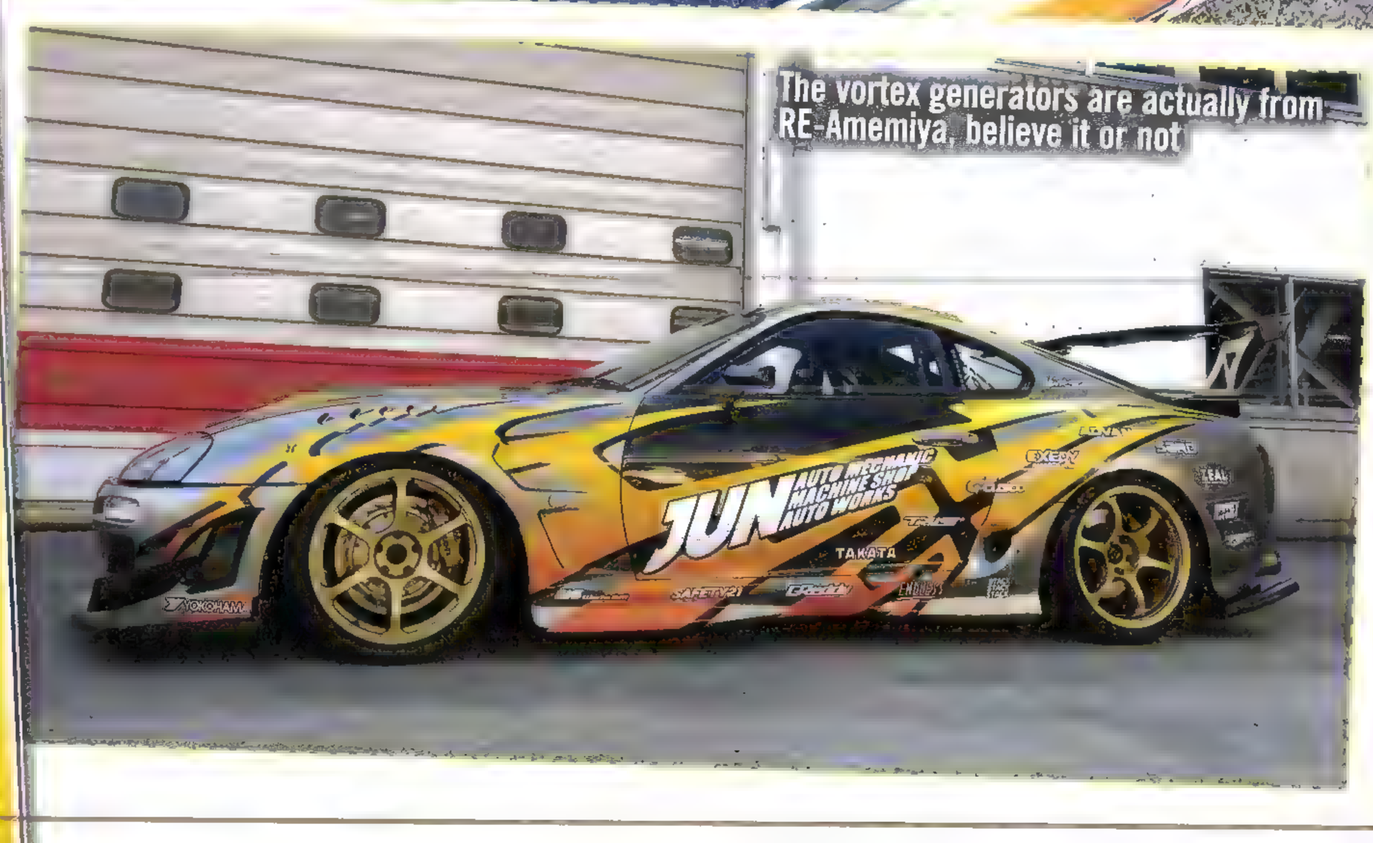
The chassis was built up originally to comply with the strict Bonneville safety regulations, which call for a very sturdy roll-cage braced in a multitude of places to stiffen up the shell as much as providing adequate safety in case of a crash. With such a great starting point, the Supra required more thought in the suspension and braking department, which is why Zeal Super Function adjustable dampers were fitted all around, mated to very stiff springs both front and back. The rear suspension member was welded directly to the chassis in true race car style, and all arms and links were replaced

The tough roll-cage regs required for cars that run Bonneville with bode well for the Supra's run at the time-attack elite

SALT SHAKERS

While the original Akira Supra never quite met the mark, JUN nonetheless has a very impressive heritage at the Bonneville salt flats, the home of top-speed records.

They first attended in 1990 with a highly modified Z32 300ZX, breaking the record for a 'street' car with 373km/h. A year later they returned with a revised JUN/Blitz partnership Z32 and laid down 419.84km/h in the E/BMS class, a record that remains unbroken to this day according to the Southern California Timing Association.



The vortex generators are actually from RE-Amemiya, believe it or not

with adjustable Ikeya Formula items to get the most out of the handling.

Braking is taken care of by big Alcon four-pot calipers at each corner mated to two-piece Grex slotted discs and Endless high-friction pads.

At the heart of the car it is still the same 2JZ-GTE that used to power the Bonneville car, freshly rebuilt with a full JUN 3.2L stroker kit. The kit was developed back in the day to handle the stresses the twin Trust T78 set-up would develop, so it's pretty much a bullet-proof bottom end to base a build on. Now running a T88-34D, the whole character of the engine has been altered to achieve fuller and more exploitable power and torque curves.

A lot of attention has gone into the head, ported and polished to increase flow and fitted with 3S inner shims and valve-springs along with RB26 lifters to allow the engine to rev freely. A 292° camshaft on the exhaust side joins the tuned variable valve timing on the intake, which helps provide the right combination of low-end grunt and top end power.

In this state of tune, the engine cranks out a respectable 800hp at just under 7000rpm with a meaty torque curve peaking at 6300rpm at a towering 89kg/m.

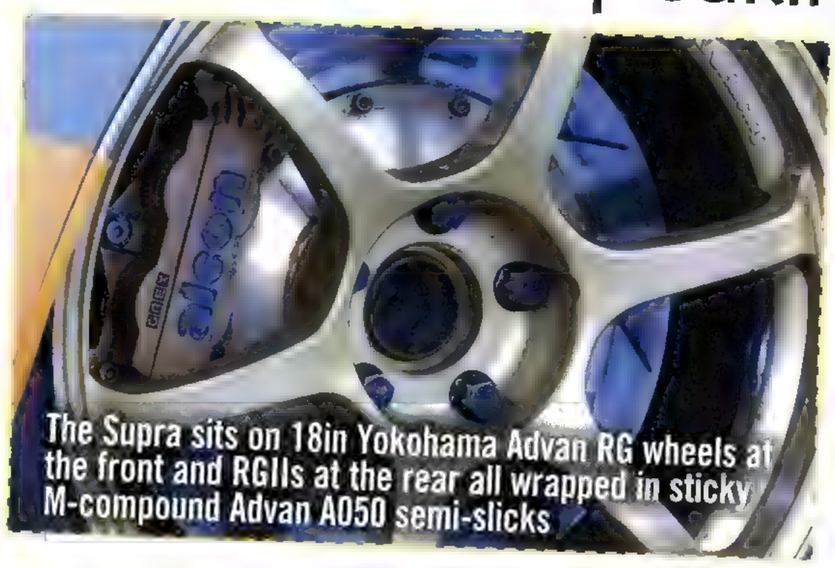
The 2JZ is fed with cooled air from the Trust four-row intercooler via a large-diameter Nissan VH45 throttle and JUN inlet plenum. Here the air is mixed with the fuel supplied by the six Sard 1000cc/min injectors, which are kept topped up by the twin Bosch fuel pumps and custom JUN collector tank in the trunk area.

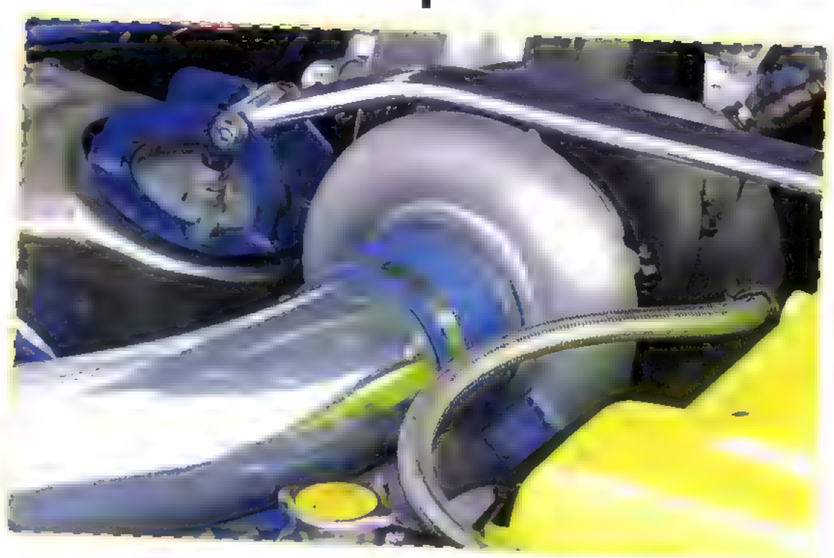
A lot of thought has gone into the cooling, with a JUN radiator joined by twin electric fans controlled by the Billion VFC. This, along with the twin Trust oil coolers, helps keep the 2JZ within working temperature even on the hottest of track days.

To handle all the power, the driveline is still running the same Hollinger six-speed transmission that has been used since the Bonneville days, mated to an HKS triple-plate clutch and topped off with the TRD limited-slip differential.

Exterior-wise, the Supra wears the same kit JUN originally developed for the first stage of tuning, which shares nothing with the long nose aero that was used in Bonneville. The front bumper provides plenty of air to the intercooler and side-mounted oil coolers, as well as having a secondary intake in the grille area to cool the radiator. To help generate more downforce at the front, JUN has added a series of dry carbon canards along with a front diffuser.

The engine cranks out 800hp at just under 7000rpm with a meaty torque curve peaking at 6300rpm


The Supra sits on 18in Yokohama Advan RG wheels at the front and RGIIs at the rear all wrapped in sticky M-compound Advan A050 semi-slicks



The FRP fenders sport a series of gills, there to get rid of hot air coming from the engine bay. The original vented bonnet is still being used, easily recognisable thanks to the bulge on the driver side to clear the turbine. To help lighten the car, JUN fitted Fuji Mspec dry-carbon doors and rear hatch, beautifully made parts created to follow the design of the stock items.

Aero side and rear skirts help give a more aggressive stance, but it's the rear additions that really set the car off, starting with the massive Sard adjustable carbon GT wing that sits high on the billet stays and moving downwards to the carbon rear diffuser and vortex generators borrowed from RE-Amemiya.

Before the JUN Supra hits circuits like Tsukuba and Fuji, it still has to go through a lot of testing and setting up to guarantee the best possible performance. Shattering records straight off the bat won't be a priority, but with not many Supras in time attack, JUN is pretty much alone in proving if the JZA80 can impress or not. We will have to wait until December to find out...

The original version of this car was built under the direction of Koyama-san back in 2000

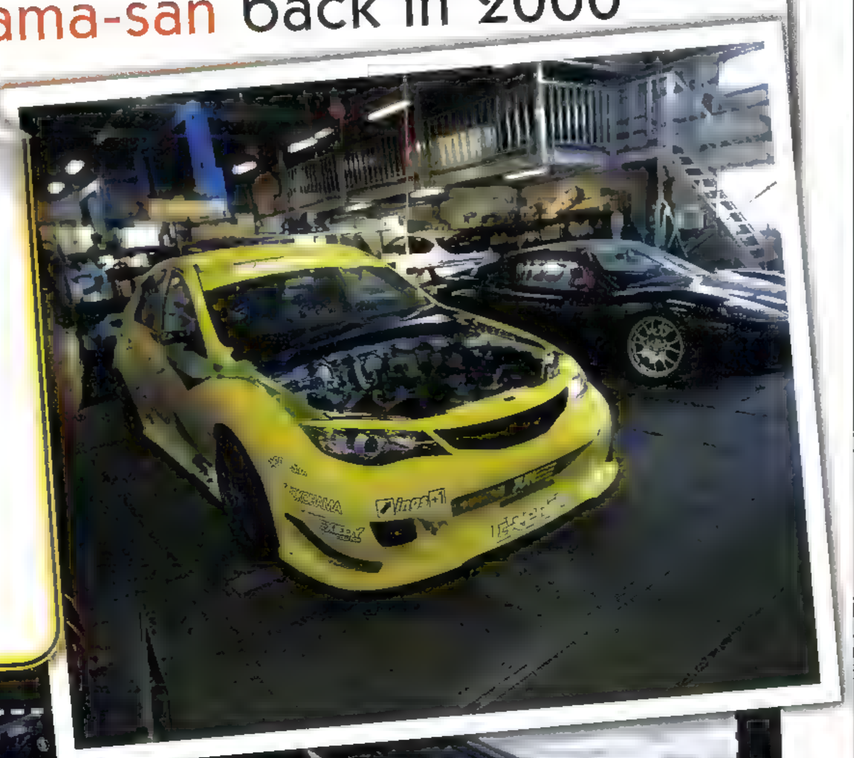
INCOMING

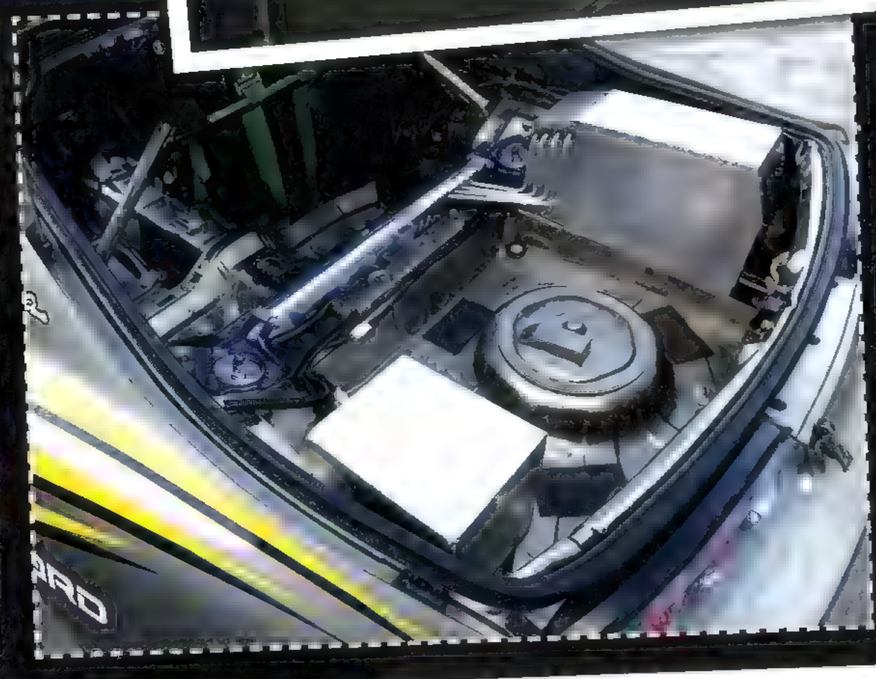
While we were down at JUN we also had the chance to check out the, by Japanese standards, extensive workshop.

There was an interesting caged TA22 MQK Celica on show with every retro gadget under the sun, track-spec Ferrari, engine-less WRX demo car, even a Mitsubishi GTO in the spraybooth.

We toured the engine room, showroom and dyno cell, taking note of a stack of trophies, including that for the 1996 GT-500 Japan Grand Touring Car Championship and 2002 HKS Hiper Challenge.

Stay tuned for full coverage in an upcoming issue.





VITALS

ENGINE: 3.2L 2JZ-GTE six-cylinder turbo

POWER: 800hp

POWER FROM FACTORY: 280hp

POWER TO WEIGHT: 0.29kW/kg

ENGINE HARDWARE

JUN 3.2L stroker kit (3210cc), 87mm forged pistons, I-section connecting rods and counter-balanced crank 90mm stroke, JUN EX camshaft 292° 10.8mm lift, IN cam valve timing 110°/115°, 3S inner shims and valve-springs, RB26 valve lifters, JUN strengthened head bolts, Trust 2.0mm metal head gasket, JUN stainless steel exhaust manifold (42.7mm), Trust T88-34D turbocharger and Type-R external wastegate, JUN big-bore stainless steel front pipe, Sard twin catalysts, JUN full titanium exhaust system and custom intake pips, Trust Airinx foam filter, JUN intercooler piping, Trust four-row intercooler, Nissan VH45 mechanical throttle-body, JUN intake plenum, twin Bosch fuel pumps, JUN custom fuel collector tank, braided fuel lines, Sard 1000cc/min injectors, JUN racing radiator with twin electric fans, custom air separator tanks, Trust 16-row oil cooler, HKS F-Con V Pro

DRIVETRAIN

HKS GD Pro triple-plate clutch, Hollinger six-speed sequential transmission, TRD LSD

BRAKES/SUSPENSION

Alcon four-pot front and rear calipers, Grex 355mm two-piece slotted rotors front and rear, Endless MA22B brake pads, Zeal Super Function adjustable suspension kit (springs: 25kg/mm front, 21kg/mm rear), Ikeya Formula adjustable pillow-ball arms all 'round, Trust front and rear strut bars

WHEELS/TYRES

18x9.5in and 18x10.5in Yokohama Advan RG/RGII wheels, 265/35 Yokohama Advan A050 M-compound semi-slicks

BODYWORK

JUN front bumper, carbon front under diffuser, carbon front canards, front fenders, aero bonnet, side skirts and rear skirts, Fuji Mspec carbon doors and carbon hatch, Sard GT wing, RE-Amemiya carbon rear diffuser and vortex generators, JUN carbon aero mirror, roof fins, JUN graphics

INTERIOR

Fully spot-welded and reinforced shell, Bonneville-spec welded-in racing roll-cage, Rigid rear suspension member, Recaro SPG racing bucket seat, Takata racing harness, Nardi steering leather steering wheel, Stack dash unit in custom carbon housing, custom switch panel, JUN boost gauge, GReddy gauges (oil pressure, exhaust temp, boost, fuel pressure), Defi water temperature gauge, GReddy Profec B Spec-2 boost controller, Billion Variable Fan Controller

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TYPE D1 Front Lip

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gold FUJI

Blending the best of the best for a 280whp pocket rocket, never has imported gold looked better

Words: Jason Round Pics: Dave Reid

The ‘baby Supra’ is much underrated in the sleeper stakes, largely because of the Starlet’s lethargic reputation via locally delivered models

There wasn't even room for an aftermarket radiator, Ant tells us

With that power-to-weight, even Skylines frequently become stuck in the rear-view

Everyone loves an underdog. Whether that be Eddie the Eel, your run-of-the-mill Aussie battler or a 500-horse HiLux, we South Hemispherians just cannot get enough. It's a pity then that the Toyota Starlet flies under the radar of most, instead left to rot away in the hands of someone who wouldn't know a wastegate from a waffle. Then there comes along Toyota lovers like 25-year-old music producer Anthony 'Antzilla' Weller, and by 'music' we mean a 280whp 4E-FTE breakin' 'gate and bouncin' off the limiter.

Anthony was born in England but has been a local for the last three years, in which time he's owned a Silvia, Soarer and Cordia among others. He's a massive Toyota fanboy through and through, formally holding the keys to a Supra and MR2 back in ol' Pommy town, so the Starlet was, well, like slipping into worn slippers.

The original idea was to get a "sh*t car, something easy on fuel, good," but the first Starlet was sadly written off. A stocker auto was then sourced and all the parts from the mangled item switched over, including the box. A Power FC was added, the usual spool suspects, nothing over the top, until Ant raced a cop and, yeah, au revoir licence.

That's when this gold example popped up for sale. The owner was, funnily enough, moving to England. The car had been sitting around as a painted shell with trim for a good four years, so Ant was at first hesitant, but a call to the engine builder, who was subsequently famous for spitting out 8sec CRXs, and receipts had him looking closer. He decided to go and take a look, and it paid off. He went with his instincts and stitched up a deal.

Back home, Ant went about putting everything back together, slotting the engine in, dash and other missing components. It soon went from a dusty and mouldy shell to pure gold. All that was left was to crank it over...

Thankfully, the previous owner hadn't added oil to the engine, which can corrode components if left hanging around unmoved, so it was up and running reasonably Herron-free.

Says Ant, "The engine was already assembled and placed in the car before I bought it, but it took me a month to get the car all hooked up and started with new parts." But as these things go, not all was baby's butt...

Yes, no one checked the fuel tank prior to starting the car. It was fine at first and then bang, no fuel. Although it sounded like a fuel pump going, a look into the fuel tank soon revealed the problem. "It was like something had died in there," laughs Tony.

The gearbox had also rusted itself to one of the selectors and decided to, thankfully, let go on the rollers before more damage was done. The stocker's in for the moment, but a TRD box is on the way, which should provide Iron Man-like invincibility on the circuits of the sunny state.

In terms of expenditure, you might say Ant has got himself something of a bargain. "I picked the car up for $10,000," he says, "and spent a further $7000 to get it fired up. Then there were hours on the dyno to tune with the new Haltech PS1000, a whole new engine loom was installed, fabrications, labour, parts, wheels, tyres and fuel."

Engine work was handled by JHH Brisbane and 101 Motorsport. On 18psi, the little stunner's putting out 280whp, and okay, while that won't win Horsepower Heroes any time soon, consider the Starlet itself has all the weight of a Sao biscuit and it's not hard to work out it is a very quick little run-around indeed.

The tuning itself was taken care of in three stages. The first tune was with all the usual safety cut functions active, rev-limited to 4000rpm and on low boost. The second stage saw the limiter upped. The third was a case of "go nuts".

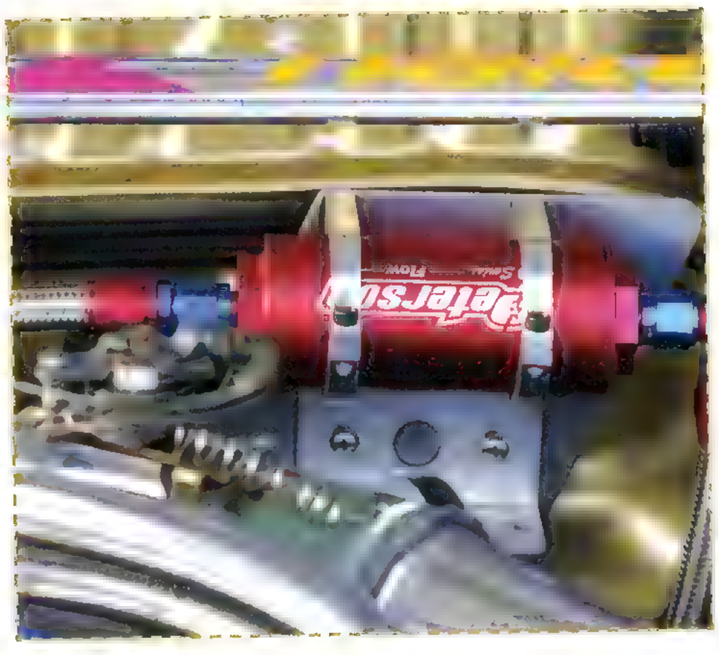
Ant admits the turbo's a little laggy, with boost coming on at 4300rpm-ish, but it matters little when the whole package is this

TOMBOYS

Spelling out to 'Tachi Oiwa Motor Sports', Toyota tuner TOM's was born in 1974 by Nobuhide Tachi and Kiyoshi Oiwa fully backed by Toyota. Although there was an oil crisis happening at the time, the company still managed to forge ahead in motorsport and production, and to this day remains heavily involved in Super GT and Formula 3 racing. Naturally, most readers would be familiar with TOM's parts and tuned vehicles, including the Angel T01, VA300 TOM's, T101 and rarities like the original TOM's Rally wheels and replacement meters.
For more info, head to www.tomsracing.co.jp.

Troy Imports has brought in some real goodies for Ant, including his most recent purchase – Cusco door bars that run down to the seat-belt mounting points, installed after our shoot

As you can see, the GT's power-to-weight is perfect for the track and keeps it quite nimble,' according to Ant



much fun. Yes, Ant could have bought a Supra, his favourite car, but like he says, he'd be crushed if he was to run against someone and get beaten. "The Starlet's so underrated," he says, which is no doubt its appeal, and with that power-to-weight, well, even Skylines frequently become stuck in the rear-view.

Of course, Ant laughs that most of what you see is "rare as f*ck for a Starlet", especially considering 99 percent spend their lives putting freckly first-timers around, but that's the appeal – no one suspects it.

The Starlet's been to QR and Lakeside, with Ant keen to get out there for some of the local sprints. Of course, he's careful not to push things too far given the rarity of the kit, and that colour ain't exactly Holden Arctic White either.

In fact, Ant recently visited a painter regarding the TOM'S spoiler, who sent him packing given how hard it would be to match the colour. Eight hours to match a colour can soon add up, you see...

And yes, this is a full, original TOM'S kit, the body fully sanded back and then sprayed up in Top Secret Gold inside and out by Wilsons Paint and Panel. We have no doubt Smokey would approve.

Finally, Ant would like to say cheers to 101 Motorsport, Evaded Motorsport, Just Dave Photography and the guys that inspire him with their own Starlets, notably Josh, Dan, Harry, Troy Imports, James, Byron, Haro and Digital Dave. Thanks also to all of Ant's friends at austarletclub.com and cruisingbrisbane.com.

Since our shoot even more goodies have gone on, including super-fat Rota Grids and a full Cusco cage. It's definitely a potent combo now, and combined with that weight and such power, there's really only one way to describe being in the passenger's seat: The greatest gold rush on Earth.

VITALS

ENGINE 1.3L 4E-FTE four-cylinder turbo
POWER: 280whp
POWER FROM FACTORY: 135hp
POWER TO WEIGHT: 0.24kW/kg

ENGINE HARDWARE

JE forged pistons, TRD metal head gasket, shotpeened rods, ported and polished head, polished crank, HKS blow-off valve, Blitz K26 KKK turbocharger and external wastegate, custom alloy front-mount intercooler and piping, custom plenum and 100mm throttle-body, Blitz dump pipe, 3in mandrel-bent stainless steel exhaust system with high-flow cat and Jaks 3in tip, Walbro high-flow in-tank fuel pump, Sard fuel-pressure regulator, HKS fuel rail, GReddy oil cooler, M&W ignition coils, GReddy Profec B II boost controller, Haltech Platinum Sport 1000 engine management system, battery relocated to boot, braided lines, oil catch can, Speedflow fittings, oil-filter relocation kit

DRIVETRAIN

Manual five-speed, straight-cut gears, Ogura lightweight flywheel and twin-plate clutch, Cusco LSD, TRD short-shifter

BRAKES/SUSPENSION

EBC Greenstuff brake pads, braided brake lines, Cusco P-Zero II coil-overs, front and rear strut braces, and underbody brace

WHEELS/TYRES

16x7.5in front and 16x8in rear SSR SP1 Professor wheels, Falken 200/45 front and Maxxis 205/45 rear tyres

BODYWORK

Full TOM'S bodykit including front bar, rear bar and side skirts, Cosworth bonnet vents, Top Secret Gold respray

INTERIOR

Stock front and rear seats re-trimmed in black leather with GT emblem and red stitching, MoMo steering wheel and gearknob, A'PEXi EL system including boost, oil temperature, oil pressure and water-temperature meters, Kenwood stereo

A look into the fuel tank soon revealed the problem. "It was like something had died in there," laughs Tony

"I've always loved the Starlets," says Ant. "This is my third one. It's just because they handle so well and power-to-weight is a winner. They are so underrated"

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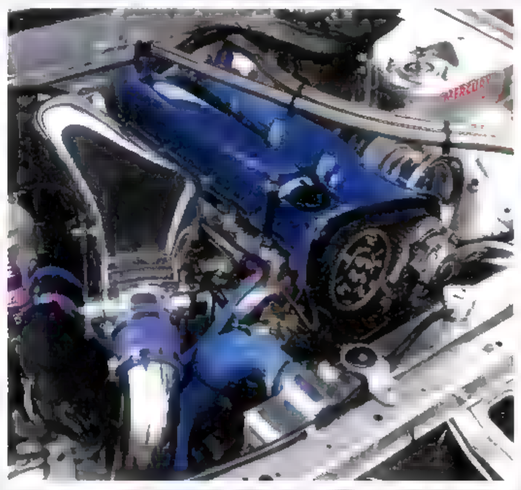

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ZM151_08

I'm EXCIT

In the immortal words of Big Kev, the 2010 Nagoya Exciting Car Showdown was exactly that, and more...

Words and pics: Dino Dalle Carbonare

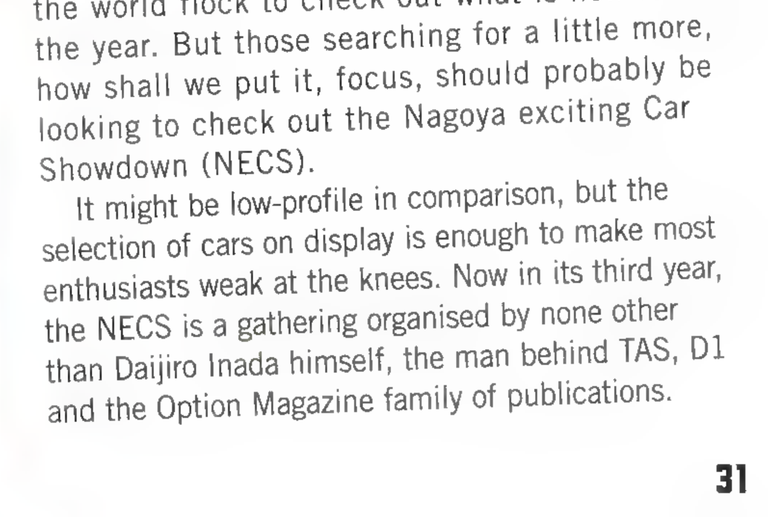
RYO shocked everyone with this wild FD3S built to participate in this year's D1 Grand Prix championship. The massive side and rear canards are there to help channel tyre smoke up into the air as the car burns rubber. We can't wait to see this car out in action

For some reason, there was something very appealing about this Miata

Auto Select is responsible for building this 882hp RB30-powered R33 GT-R. This Skyline is used in the Meister Cup Series in southern Japan raced mainly at the Okayama and Central circuits. It's a real beast

We liked this pink Origin/Ziek RPS13 sporting a very fresh style thanks to the Origin aero. This drift machine backs up its smooth looks with a Ziek 2.1L stroked SR20 developing 420hp, powering the rear wheels via an HPI six-speed transmission

PAC took home one of the 10 Best of Show awards thanks to its extensive aesthetic modifications. The front fenders are styled to mimic the ones used on the GT1 FIA GT R35 race cars, while the engine develops around 600hp thanks to an MCR ECU tune



When it comes to shows in Japan, nothing attracts a bigger turnout than the Tokyo Auto Salon (TAS). New product releases and high-profile show cars litter the halls of the Makuhari Messe Exhibition Centre as people from around the world flock to check out what is new for the year. But those searching for a little more, how shall we put it, focus, should probably be looking to check out the Nagoya exciting Car Showdown (NECS).

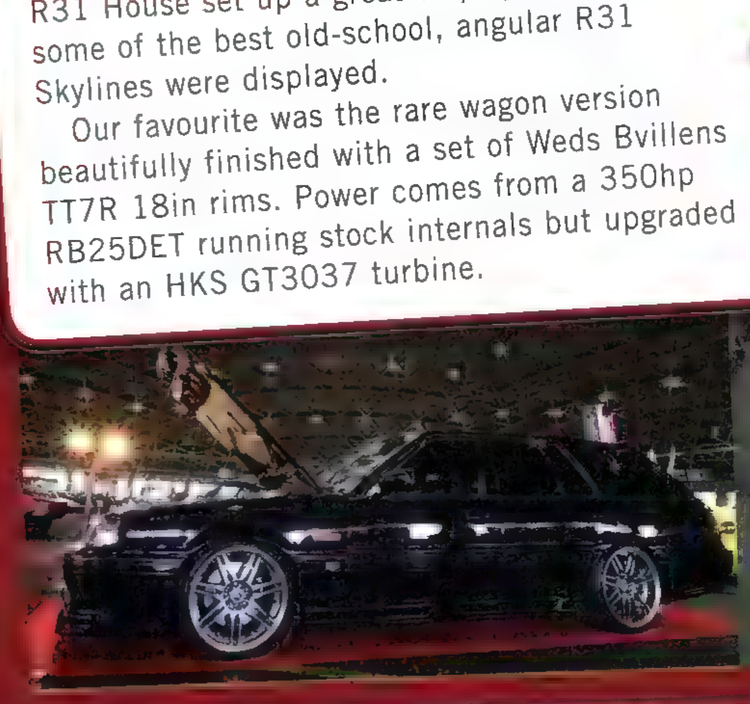
It might be low-profile in comparison, but the selection of cars on display is enough to make most enthusiasts weak at the knees. Now in its third year, the NECS is a gathering organised by none other than Daijiro Inada himself, the man behind TAS, D1 and the Option Magazine family of publications.

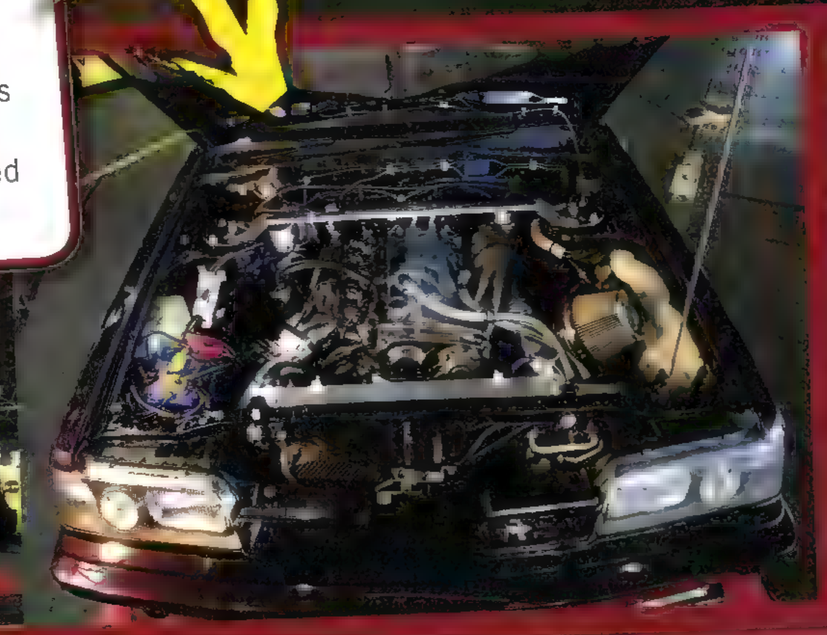
This Monsters Garage 'Z was a real standout for us given its cleanliness

IN THE HOUSE

R31 House set up a great display area where some of the best old-school, angular R31 Skylines were displayed.

Our favourite was the rare wagon version beautifully finished with a set of Weds Bvillens TT7R 18in rims. Power comes from a 350hp RB25DET running stock internals but upgraded with an HKS GT3037 turbine.

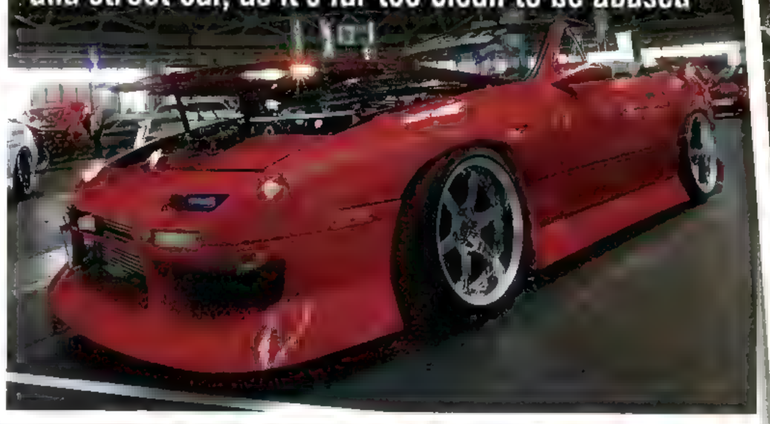




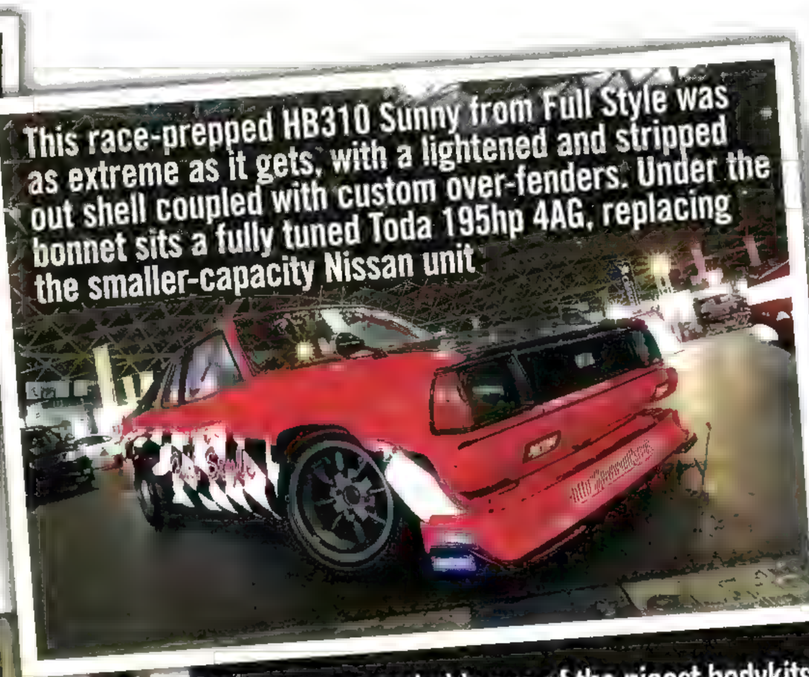
R-Magic built street-going FD3S. This car runs the same kit as the one fitted on Takayama's D1 RX-7 but looks so mean with the simple pearl white colour and no race livery

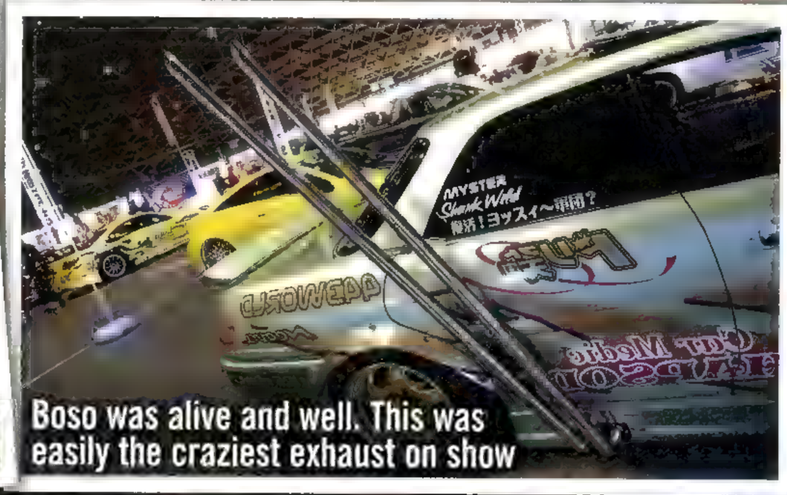
This 180 featured an interesting rear bar

A rare FC RX-7 convertible sporting a 700hp 20B engine swap. The car is used for the occasional drift exhibition, but we expect it's more of a show and street car, as it's far too clean to be abused



This race-prepped HB310 Sunny from Full Style was as extreme as it gets, with a lightened and stripped out shell coupled with custom over-fenders. Under the bonnet sits a fully tuned Toda 195hp 4AG, replacing the smaller-capacity Nissan unit

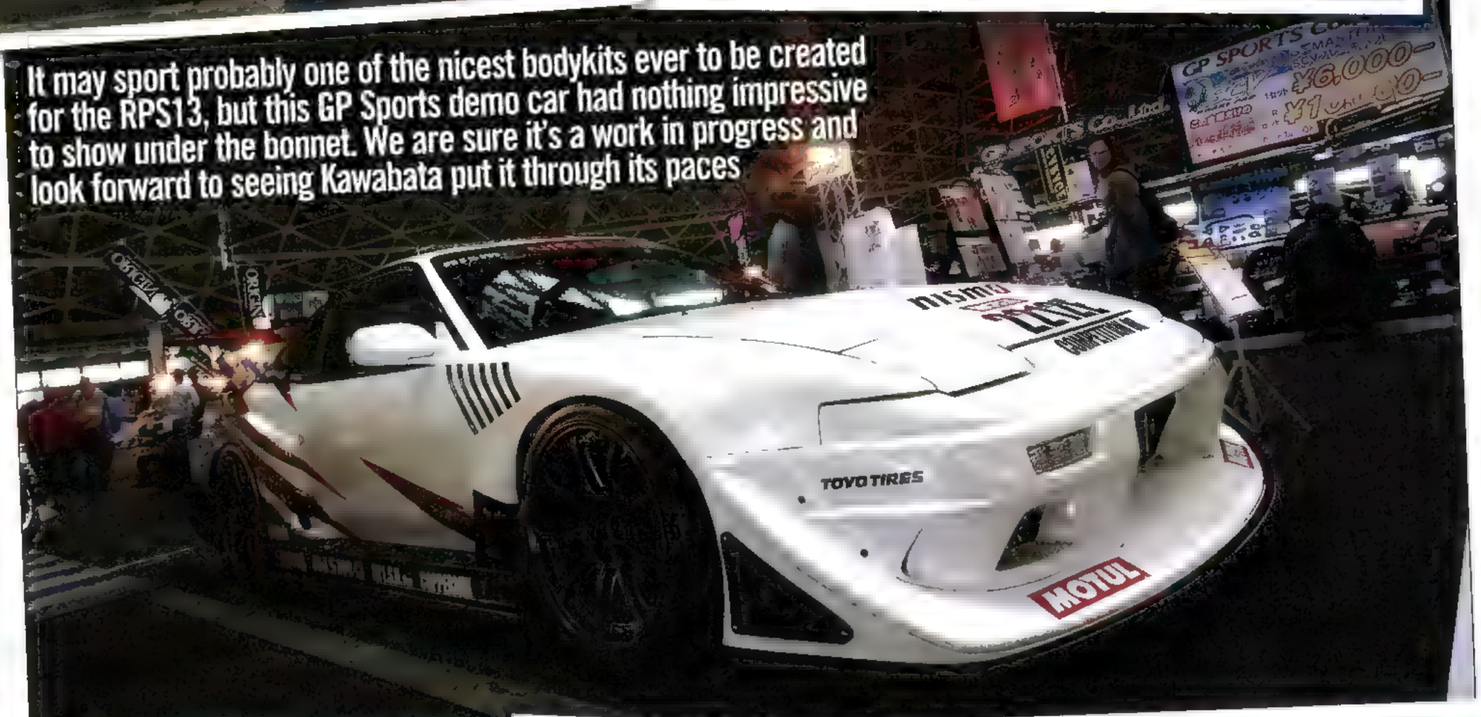




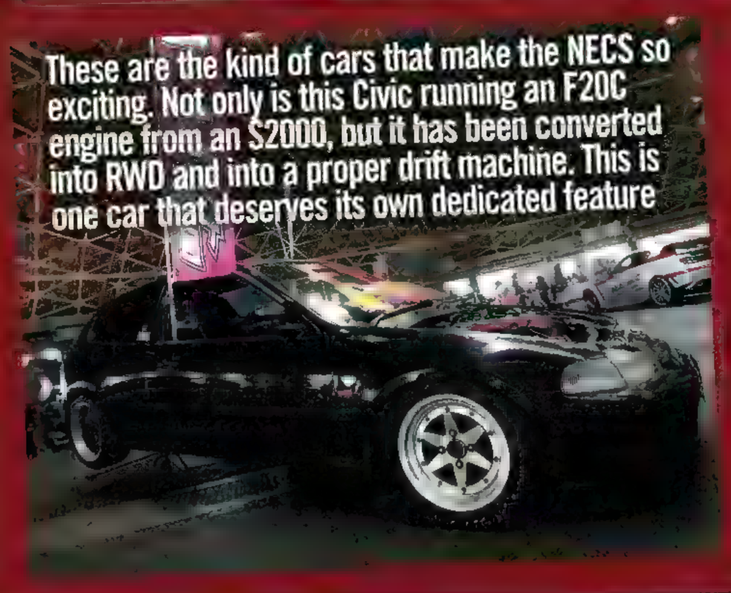
Boso was alive and well. This was easily the craziest exhaust on show

VIP style wasn't particularly well represented this year, but one slammed luxury ride that impressed the judges was this Cross Label Aristo. It represents one of the more show-oriented ways the VIP style is evolving to, with massive wheels barely contained by the blistered fenders

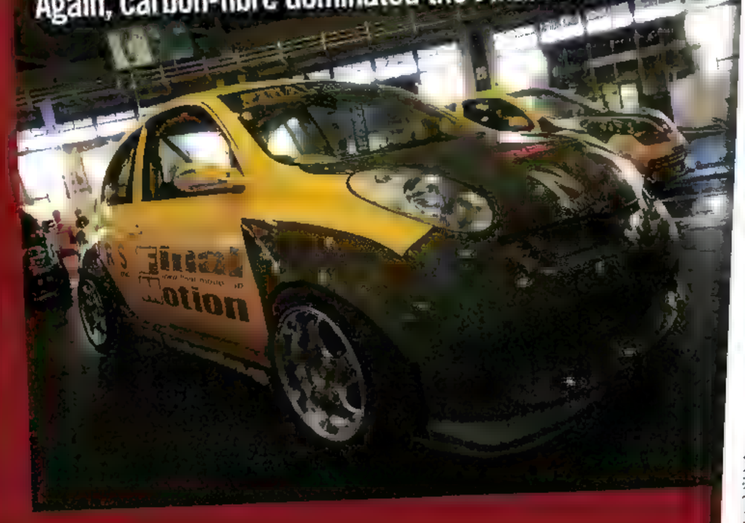
It may sport probably one of the nicest bodykits ever to be created for the RPS13, but this GP Sports demo car had nothing impressive to show under the bonnet. We are sure it's a work in progress and look forward to seeing Kawabata put it through its paces



These are the kind of cars that make the NECS so exciting. Not only is this Civic running an F20C engine from an S2000, but it has been converted into RWD and into a proper drift machine. This is one car that deserves its own dedicated feature



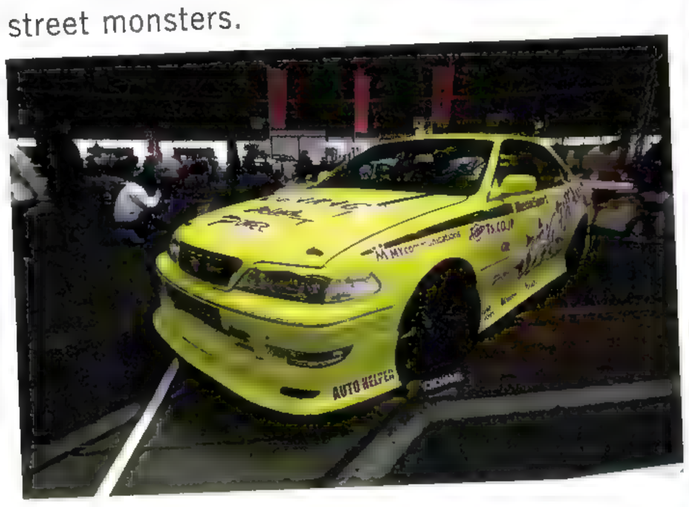
Again, carbon-fibre dominated the Final Motion stand



Abflug along with Revolfe set up an impressive line-up of cars that included Supras, MR-Ss, Skylines and even a Porsche. But it was this Z32 that looked best in our eyes, its older looks enhanced with an aggressive wide-body conversion. The engine, tuned by Revolfe, has been stroked to 3.1L and runs twin TD05H blowers for 530hp.

Inada's idea was to create more of a get-together of friends in the tuning industry to help smaller shops scattered throughout Japan show their best creations. The event is a strictly on invitation basis only, as Inada-san hand picks the 300 or so cars that will be put on display under the dome of the Nagoya Port Messe.

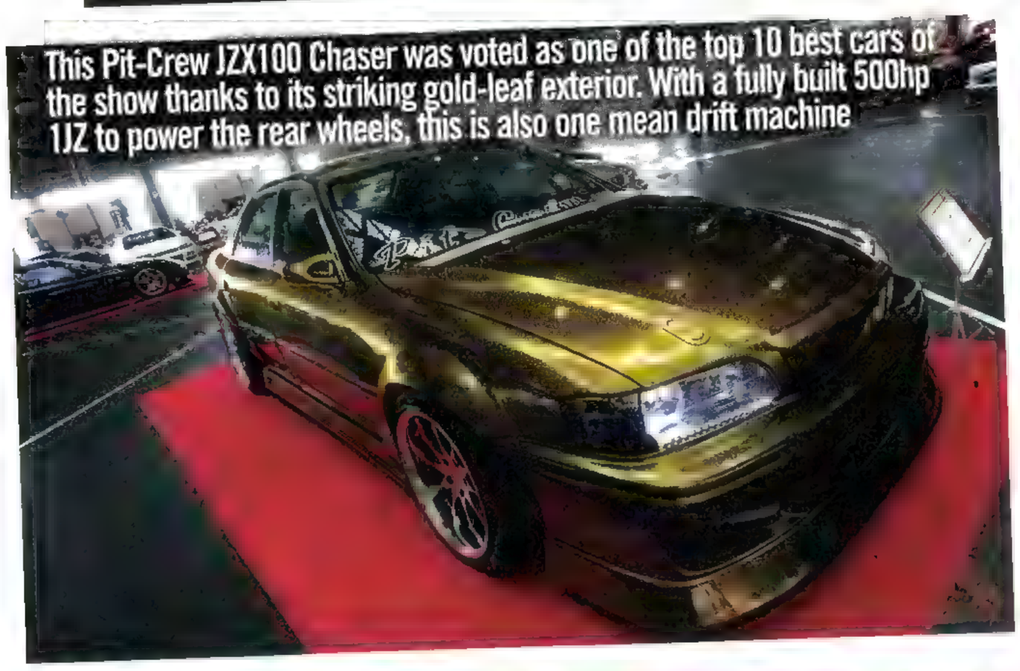
For 2010, the variety was as vast as ever, with every style being perfectly represented by some of the most stunning cars in Japan. Performance takes precedence, with all vehicles displaying very high levels of work, be it from time attack and drag machines all the way to drift cars and high-powered street monsters.



Missiles aren't just limited to the drift matsuris it seems...

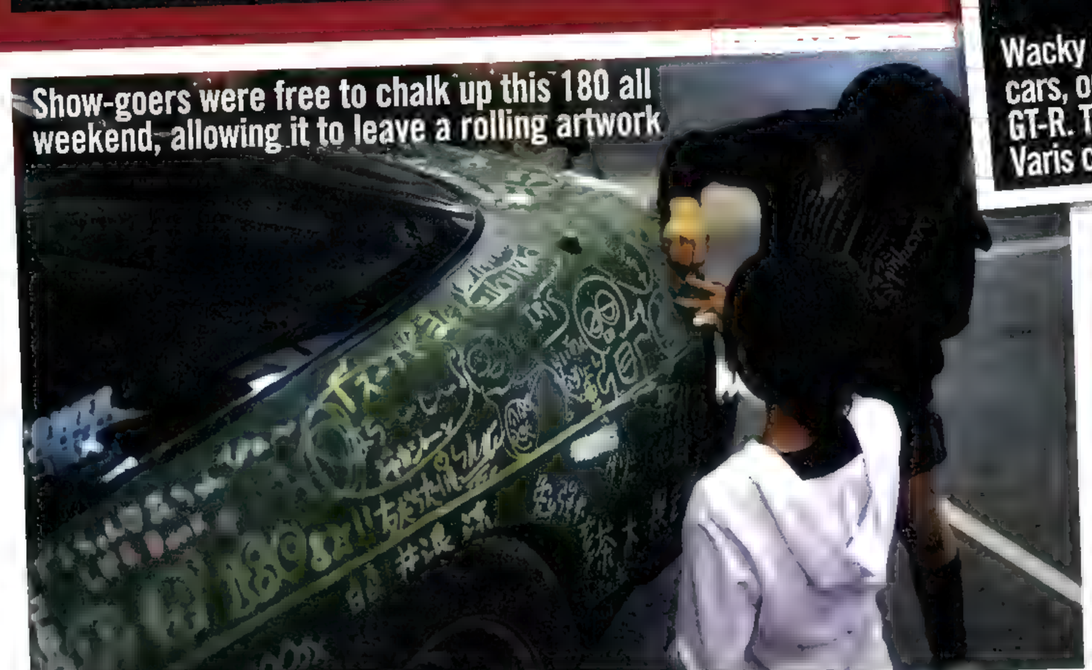
It may be a fraction of TAS, but we struggled to cover the show in two days

This Pit-Crew JZX100 Chaser was voted as one of the top 10 best cars of the show thanks to its striking gold-leaf exterior. With a fully built 500hp 1JZ to power the rear wheels, this is also one mean drift machine



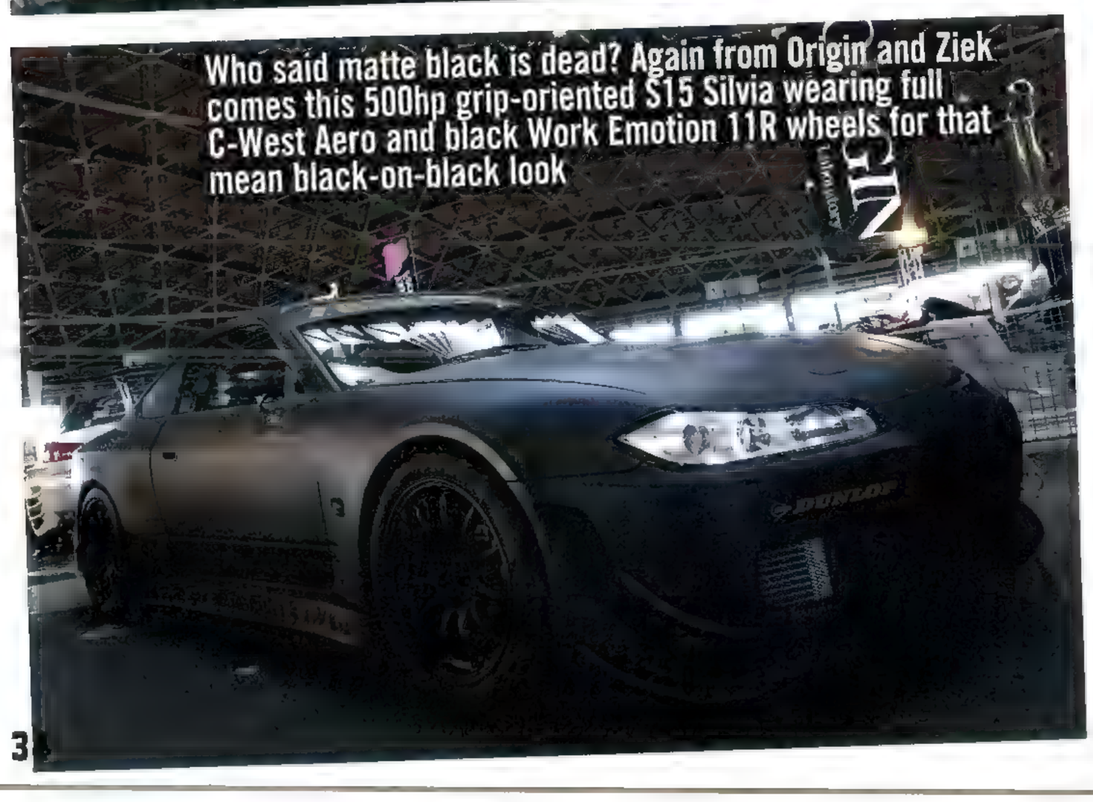
Wacky Mate showed up with these two tantalising grip-oriented customer cars, one an RE-Amemiya-kitted 420hp FD3S and a 600hp R32 Skyline GT-R. The simple lines of the R32 were highlighted with a series of subtle Varis carbon aero parts, not to mention the massive GT wing

How can we forget the little Kei-car sports cars of yesteryear? Provile had a tantalising line-up of cars, which on top of this Autozam AZ-1, included a Honda Beat, Suzuki Cappuccino and a Daihatsu Copen



Show-goers were free to chalk up this 180 all weekend, allowing it to leave a rolling artwork

This Yashio Factory FD caught our eye thanks to its interesting combination of URAS aero and Kazama Auto wide-body kit. The car has been built for both drift and grip, and has a mildly tuned 13B, which develops 400hp thanks to a GReddy T67 single turbine



Who said matte black is dead? Again from Origin and Ziek comes this 500hp grip-oriented S15 Silvia wearing full C-West Aero and black Work Emotion 11R wheels for that mean black-on-black look

The R35 scene is moving fast, with shops like Phoenix Power going full out on this silver customer GT-R. The car runs the new GReddy twin-turbo replacement kit, which, with supporting modifications, can boost power to 800hp. Twenty-inch BBS LMs are colour-matched to the silver body.

MONKEY MAGIC

This is Nomuken's latest creation. Last year we saw how he tried to make the ugly Nissan Rasheen more interesting by dropping a tuned SR20 in the engine bay, but this time around he has gone even more extreme.

That big lump of metal sitting in the front of the S13 is a 5L V12 from a Toyota Century (!). The idea was to give a Ferrari-like character to the old Silvia and to have plenty of low-RPM grunt for when the car is taken on track and drifted. This is the craziest S-chassis we have seen so far!

The little Honda CR-Z has only been on sale in Japan since the end of February, but it has already been very well received in the tuning world. We found this little manual hybrid eco-sports car at the Bride stand fitted with a new type of reclinable bucket seat and a nice set of Advan wheels

It may be a fraction of TAS, but we struggled to cover the show in two days, as there was just so much to look at, every car requiring to be scrutinised in depth. It's shows like this that give a good representation of where the JDM tuning world is currently sitting at, proving that good old-fashioned tuning coupled with a good level of flair is still alive and well in Japan.

High-profiled shows like TAS may have shifted towards the show-car side of the spectrum with emphasis being put on looks rather than oily bits, but we can rest assured that all is still well in the land of the hashiriya.

G4

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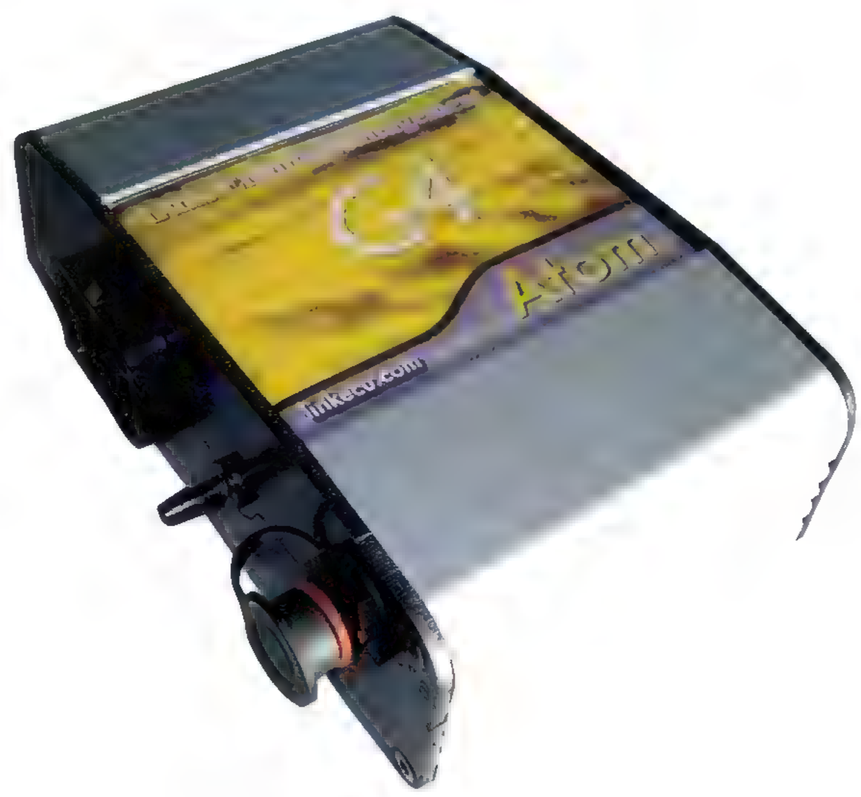

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Armed C

A flashback to the golden age of engineering comes the Veilside Combat-R R32

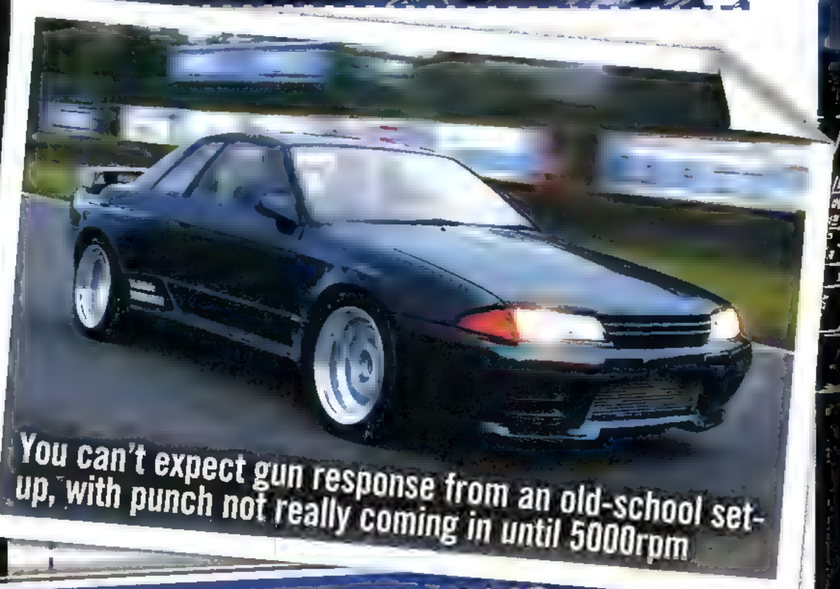
Words and pics: Dino Dalle Carbonare

ombat

When Andy of Powervehicles.com moved out to Japan from Scotland he probably had no idea he would have found himself where he is right now. On top of running a car export business, Andy suffers from the most incurable addiction to drifting, which recently forced him to relocate to a small town in Fukushima-ken called Nihonmatsu.

To anyone in the know, this little village nestled deep in the Tohoku countryside is the home of Nobushige Kumakubo of Team Orange, who also happens to be the owner and creator of what is commonly referred to as Drift Heaven, Ebisu Circuit.

A gold licence allowing him to drift any circuit in the massive compound whenever he likes is the only way Andy can take care of his terrible obsession and run his business at the same time. And if you thought his



You can't expect gun response from an old-school set-up, with punch not really coming in until 5000rpm

DRIVING IMPRESSIONS

Out on the winding Higashi course, a circuit often used in Hot Version battles, the Veilside Combat-R certainly didn't lack performance, but really needed to be worked hard to keep the power-band on the boil.

The twin RX5s seem more suited to fast road driving and the occasional drag launch than being put through their paces on the track, with nothing really happening until well over 5000rpm. This is how things were done 20 years ago, and as Andy explains, the new owner in the UK is already planning some upgrades to make it more responsive.

The recirc layout here is rather interesting and had us scratching our heads for a while

hobby was fun, his job will probably make most of you very jealous, as Andy scours Japan looking for the best modified machinery he can lay his hands on, selling them on to his customers, passionate lovers of everything and anything JDM. And his latest purchase is something very special.

Built in 1990 by a certain Yokomaku Hiranao, this 20-year-old Skyline GT-R may not only be referred to as a modern-day classic, but a very unique one-off Veilside creation that has been immaculately looked after. So, with promises of being allowed to drive this old-school masterpiece on an empty Higashi course, the four-hour drive up to Ebisu didn't seem all that bad all of a sudden.

Nothing can really prepare you for the visual impact of this original Yokomaku creation. This BNR32 was built in the first year that Veilside actually opened for business, and it's a testament of the forward-thinking nature that the company possessed.

At that time there weren't many shops concentrating on the kind of attention to detail that made Yokomaku such a respected figure in the business. He combined unheard-of power figures with outrageously styled exteriors and fully custom interiors. It was the final step in turning already great Japanese sports cars into something that resembled fully fledged supercars, helping the tuning boom Japan flourished in during the '90s.

With only 35,000km on the clocks, this Combat-R is spotless, the deep olive green still exhibiting the same glossy finish it did all those years ago. The wider front fenders and the massively blistered rears are responsible for the presence this car has, which when seen from the rear really looks like it means business.

The front bumper remains stock but was modified to incorporate a lower lip section and the N1-like square vents that help flow air to the top part of the HKS intercooler. At the rear the stock bumper remains, only a low set spoiler giving that unmistakable Veilside touch. Combat-R aero mirrors replace the stock folding items, while it's the Work Meister S1 wheels that complement the looks no end.

Size choice has obviously been very generous to help fill out the widened stance the car now boasts, so up front we find 10J by 18in rims shod in 265/35 Advan Sport rubber, with the rear sporting 12J-wide 18in rims. The massive 315/30 Advans were carefully chosen to have the same rolling diameter as the front tyres so as not to create problems with the transfercase.

The Combat-R exhibits a very period-correct stance with the adjustable Bilstein dampers set a little higher than what many GT-R owners would run today, but doing a good job of obtaining that all-important aggressive look.

With only 35,000km on the clocks, this Combat-R is spotless

The Veilside treatment continues in the interior with full two-tone leather and alcantara upholstery. Great care was taken in covering the top part of the dashboard in alcantara, down to the dark green stitching that matches the green carpeting and, of course, the body colour. The beige leather upholstery covers pretty much the rest of the cabin, including the door cards, the pillars, the headliners and even the lower dashboard and centre console.

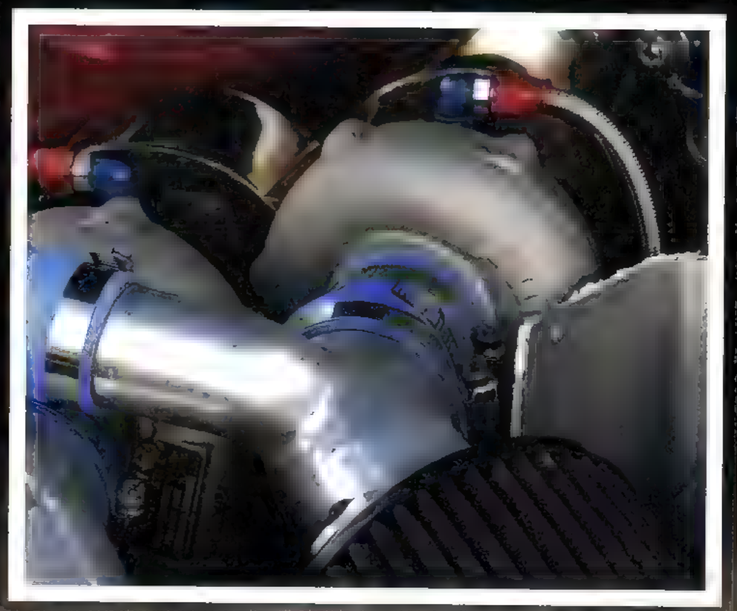
Colour-matched Veilside instrumentation is joined by a few modern gadgets like the HKS EVC boost controller and a more accurate Blitz boost gauge. While the colour choice may be subject to personal taste, there is no denying the amount of work that went into this project 20 years ago.

Popping the hood reveals the final piece of the puzzle, the fully tuned Veilside Evolution-R RB26. At its heart you will find HKS oversized pistons, H-section connecting rods and a Brian Crower billet crank, which has the job of dealing with the fierce boost the IHI RX5 twin-turbo set-up throws at the engine.

The two old-school blowers are controlled by their own Trust external wastegate, while an equally old-style recirculation layout is connected up by custom aluminium piping, with the Trust blow-off valves mounted high, right next to the engine. A pair of Bosch fuel pumps sends the required fuel to feed the six 720cc/min injectors, all handled by the HKS F-Con V Pro ECU.

Power is rated at 650hp, but the turbochargers are capable of handling more boost if needed – something the new owner of the car may consider doing.

The interior is also getting taken care of, but it's hard not to feel a little nostalgic when seeing cars of this calibre from such a golden time in the tuning world. Andy is a little sad to see the Veilside Combat-R go, but there is no doubt he will be finding plenty of equally stunning machinery to replace it with. That is, if he can get himself away from all the drift tracks at Ebisu... «



It wasn't about stretch back in the day, with these 315s right up there with the supercars of the time

VITALS

ENGINE: 2.6L RB26DETT six-cylinder twin-turbo
POWER: 650hp
POWER FROM FACTORY: 280hp
POWER TO WEIGHT: 0.24kW/kg

» ENGINE HARDWARE

Veilside Evolution R engine, HKS 87mm forged pistons, H-section connecting rods, Brian Crower crank, HKS 264°/9.5mm lift cams and metal head gasket, IHI RX5 twin-turbo set-up, two Trust external wastegates, Veilside stainless steel exhaust manifolds, outlet pipes and front pipes, Apex catalyst, Veilside exhaust system, Apex filters, Veilside custom intake and balancer pipes and custom intercooler piping, HKS intercooler, Trust twin blow-off valves, Veilside modified inlet manifold (12-injector type), Bosch twin fuel pumps, Earls braided fuel lines, adjustable FPR, Veilside fuel rail, six Sard 720cc/min injectors, HKS oil cooler, Earls braided oil lines and braided brake servo lines, Koyo Racing radiator, HKS F-Con V Pro engine management

» DRIVETRAIN

OS Giken triple-plate clutch and lightweight flywheel

» BRAKES/SUSPENSION

Veilside brake pads, Bilstein adjustable suspension, ARC front and rear stabilisers, Veilside front tower bar

» WHEELS/TYRES

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» BODYWORK

Veilside Combat-R wide-body conversion, modified front bumper with integrated lower lip, bumper vents, front wider fenders, rear wider fenders, rear spoiler and aero side mirrors

» INTERIOR

Veilside 10,000rpm/320km/h clocks, triple meter panel, leather seats, leather/alcantara clad dashboard and centre console, leather headliner, leather/alcantara steering wheel, Veilside leather gearknob, handbrake and shifter leather boots, HKS EVC boost controller, Blitz Racing Meter DC boost meter, Veilside kick plates, Addzest DB345 CD player

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Words and pics: Martin Donnon

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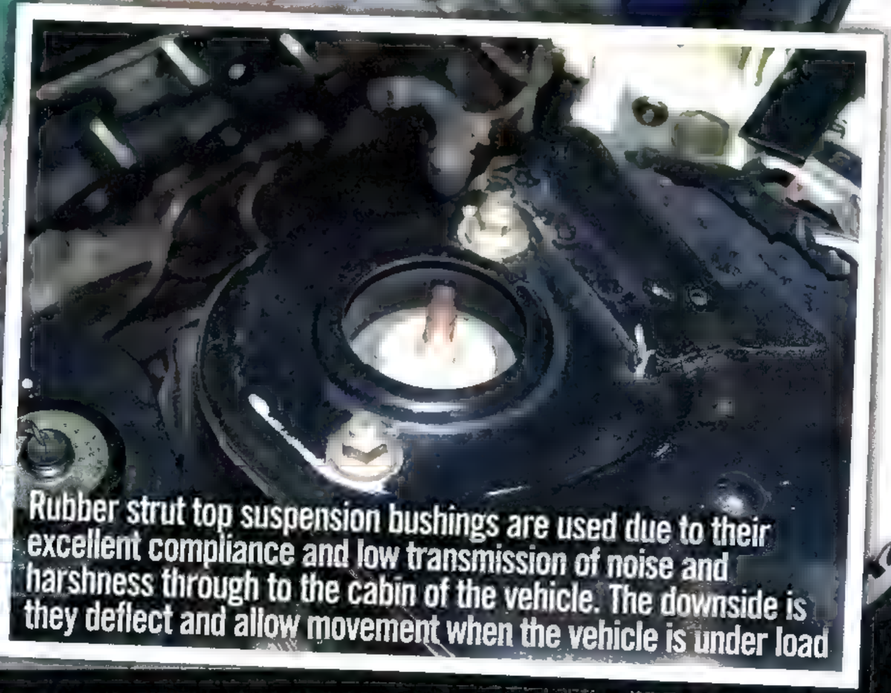
STIFF Competition



Rubber strut top suspension bushings are used due to their excellent compliance and low transmission of noise and harshness through to the cabin of the vehicle. The downside is they deflect and allow movement when the vehicle is under load

It's often said that stiffer is better, and that stiffer is faster, and when it comes to sharpening up the performance of your import on the track or street there are no truer words spoken or written.

Unfortunately, this stiffness that's required for best performance doesn't actually sell cars, so the bottom line is that the majority of Performance Imports aren't completely engineered with chassis stiffness as a priority. There are some notable exceptions, such as Lancer Evolution and even Lotus Elise/Exige, but the reality is that even the best production cars can do with some stiffness upgrades.

THE JACK TEST

A good way of measuring the deflection and 'twist' in your car is to place a jack in the front jacking point and lift one of the front wheels off the ground. Once you have this single corner of the car in the air, go and try to open the front doors on either side. More often than not you will encounter more difficulty in opening and closing the doors.

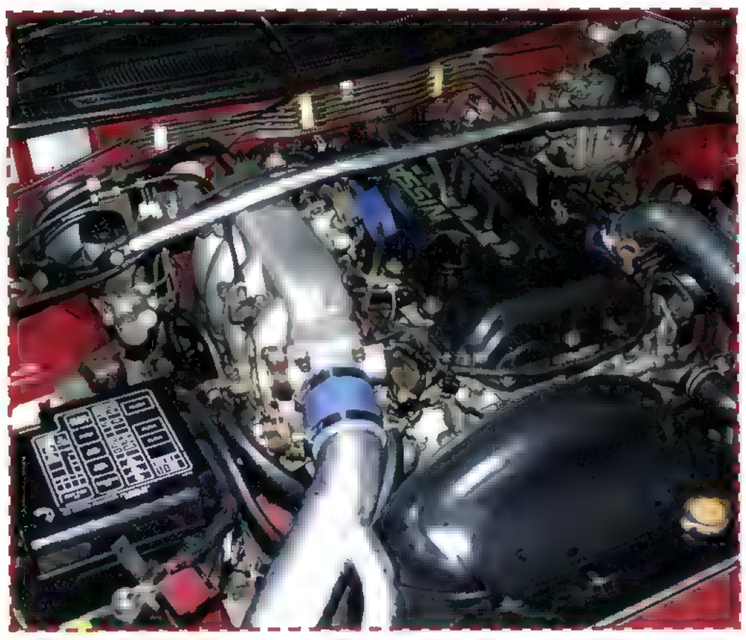
This increased difficulty comes from the actual body of the car twisting as the jack is applied, physically changing the shape of the door opening. That's not a joke. Some cars really do move enough when lifted that they twist the entire body. If you have a car that's in this boat, then you really need to attend to the rigidity for a more accurate driving experience.

To make substantial improvements in the way the car handles, you need to start at the very beginning, or in the case of the suspension system, at the very end. This is the point of first movement and flex one removed from the tyre and the tarmac. This point is, in fact, the suspension bushings and mounting points.

MOUNTING POINTS

Much is made of changing suspension-mounting points to those of a more rigid design in the aftermarket world. It doesn't matter whether you own a high-end performance four or a relatively old and cheap banger, there will be many different ways of addressing the suspension mounting points for allegedly improved handling.

The most common way of improving suspension bushings is with fitting aftermarket urethane components. Much stiffer than the factory rubber mountings, the harder urethane doesn't have as much 'give' as the rubber, hence it doesn't absorb as much load or vibration, transferring it straight to the chassis of the car. This is, of course, a double-edged sword depending on the stiffness of the vehicle body.

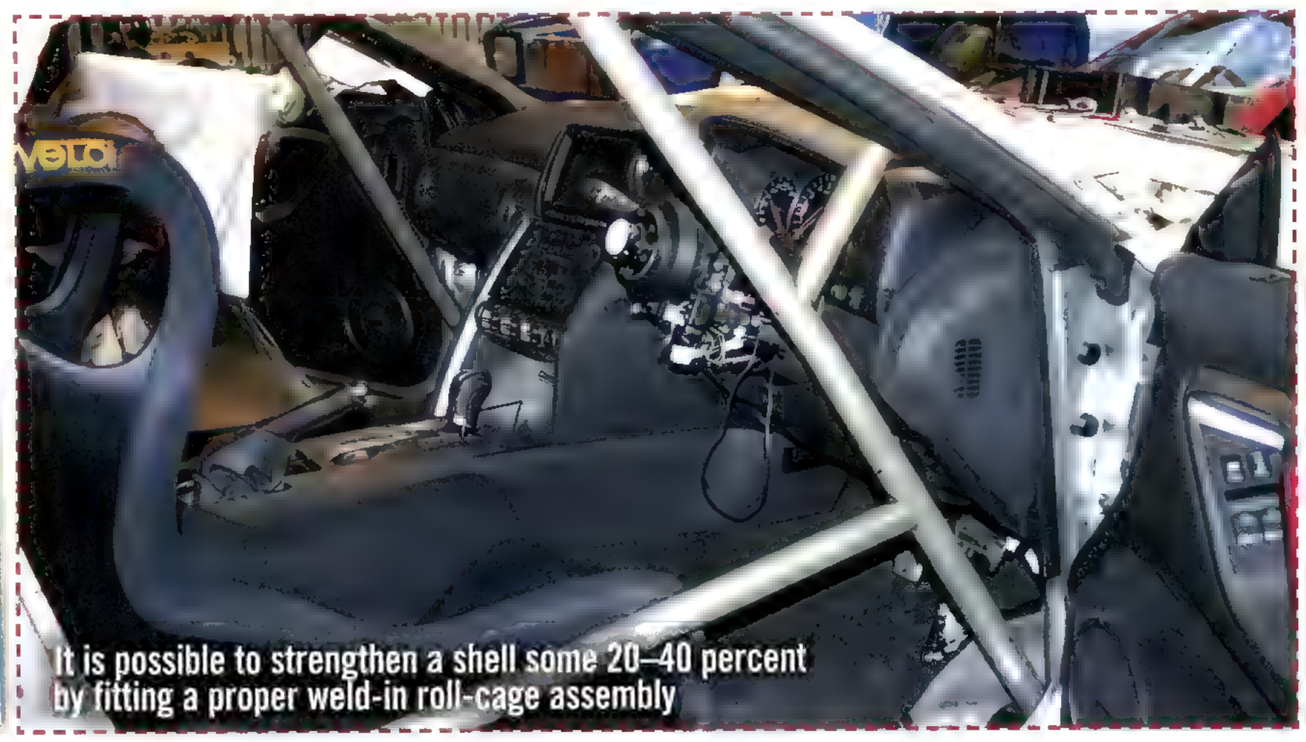


The humble strut tower brace can do a very good job of adding rigidity to a chassis and is much underrated

Urethane suspension and subframe mounts are cheap and cheerful in most instances and when made correctly are genuine straight-fit propositions for your car. If there was any problem with urethane it would be that it has a lesser 'memory' than rubber, which means when crushed it normally won't come back to its original shape and deform somewhat. This created problems with bushes tearing and popping out in the early days of urethane, but apparently this is under control with advancements made in current offerings.

Top-level suspension mounts are solid... I mean completely solid, using aluminium or steel spacers to replace the rubber in the subframe and 'rose' or 'rod-end' joints for moveable joints. This is the ultimate set-up for any racecar (and is, in fact, the way genuine racecars are built), but beware a road car with this kind of suspension technology will be shocking. Loud, lots of clunking and extreme vibration is the price you pay for stiffness when using solid mounts.

A properly welded in roll cage such as this example in the GT Autosound 200SX adds great stiffness to the chassis



It is possible to strengthen a shell some 20–40 percent by fitting a proper weld-in roll-cage assembly

THE STRUT BRACE AND OTHER BRACES

Whilst normally only in existence for decorative purposes (ie. they look good), the modern strut brace that sits between the front (and hopefully rear) suspension towers of your car does indeed do a fair bit of good providing it's heavy-duty enough. It's the tops of the struts that seem to do the most flexing with most road cars, as evidenced by the number that crack and pull the shock tower away from the chassis when used for circuit work.

The strut brace addresses this issue by keeping the two suspension towers to which it is attached equally spaced at all times. As one suspension tower either tries to move in or out, it has to provide the opposing force to the other tower, which in turn effectively doubles the stiffness of the tower and provides much needed rigidity. There is some sense then in having a good strut tower brace on the front of the car, as it will experience the most flex due to the combinational loads of steering and braking.

There is also much merit in having strut bracing across the rear end of the car as well. Whilst not normally flexing as much as the front end, the rear of the vehicle will move around and try to rear-steer the car in different directions at different times, normally when you are halfway through a corner and the chassis is loaded the hardest, which is where you least want to experience it!

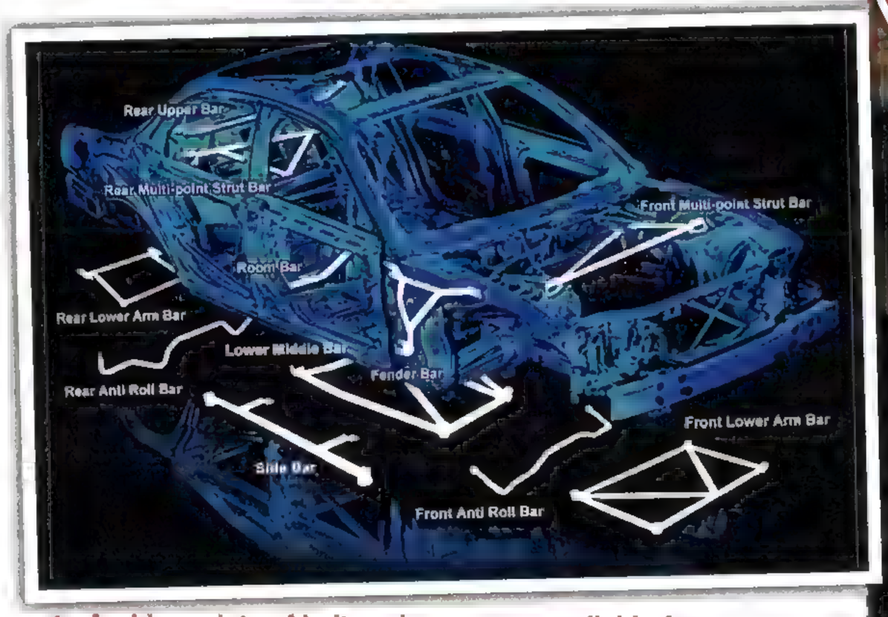
Sticking your head under most any modern Japanese performance car will show that it's not just the struts that need to be braced. Take, for example, the humble S15 Silvia. It's a car that has all sorts of little brackets and braces that run underneath the car to add rigidity across its entire length.

This is where the Japanese and Europeans differ in approach. Take, for example, cars like Lotus and Lamborghini. Though they are 'top end' from a pricing viewpoint, the structural strength is engineered into the structure proper. The Japanese love adding arms, braces and structural links, even in their highest performance cars. There is no better evidence of this approach than looking underneath an R35 GT-R. It's 'brace central'.

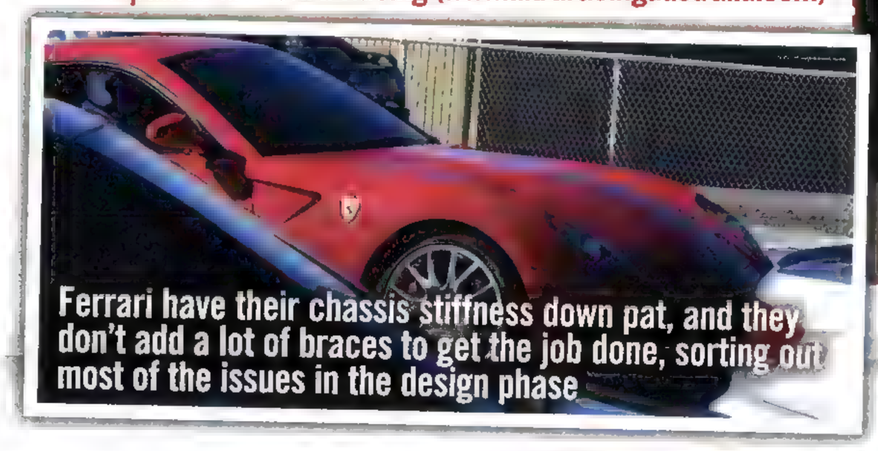
Adding aftermarket body braces as well as strut braces is an excellent idea then. Most of the better drift suppliers realise there is a need to add stiffness, hence plenty of aftermarket arms and bars are made for popular Japanese models. If you can't get parts off the shelf, then you can easily make your own with nothing more sophisticated than some metal off-cuts and a welder.

THE CAGE

The ultimate in chassis stiffness and handling poise comes from adding a roll-cage. This is the last link between the tyre and the driver, and as well as adding much needed protection in the case of an impact, a good roll-cage also does the maximum of any possible chassis modification for adding stiffness. There are like most disciplines in the vehicle handling field roll-cag-



A wide variety of bolt-on braces are available from companies like Ultra Racing (www.ultraracingaustralia.com)



Ferrari have their chassis stiffness down pat, and they don't add a lot of braces to get the job done, sorting out most of the issues in the design phase

Some of the very best roll-cages actually tie through to the strut tops like this example to make the entire car rigid

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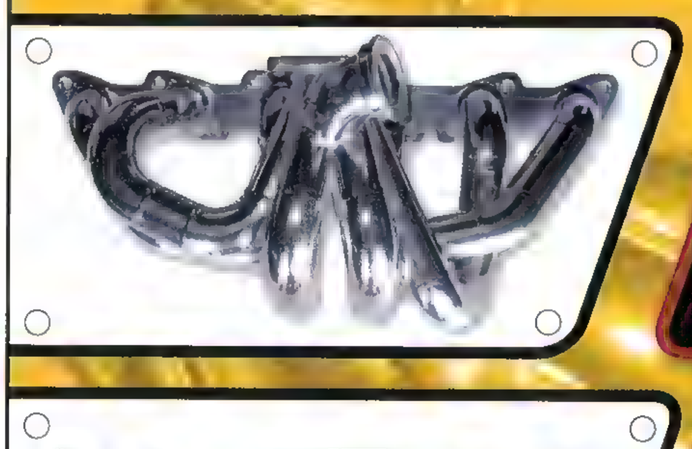

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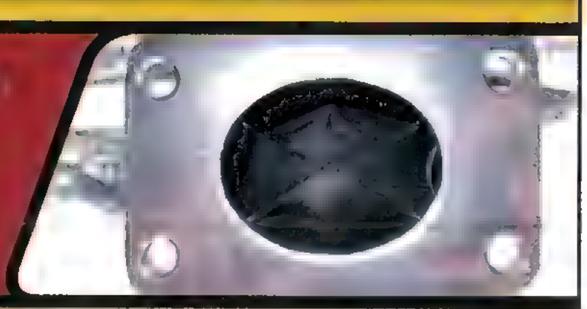

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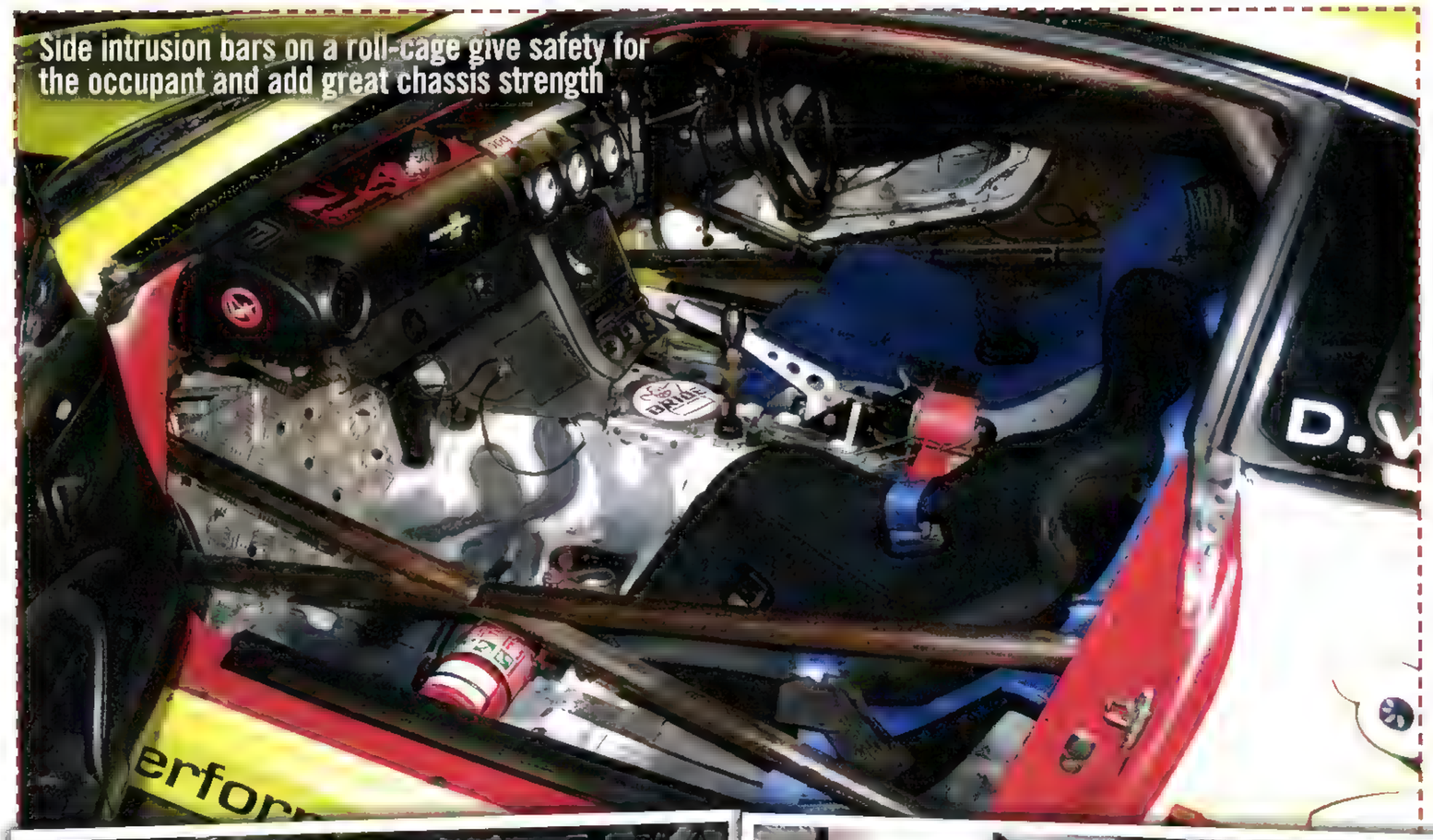
es... and then there are roll-cages.

An entry-level kind of roll-cage is the bolt in four-point style that is required under some motorsport rules. Whilst it does 'something', the fact that the roll-cage bolts to the floor of the car means that it's still going to allow a fair degree of body movement. The advantage of the bolt-in roll-cage is that it is easily removable for road use, a field where the proper weld-in triangulated roll-cage is illegal.

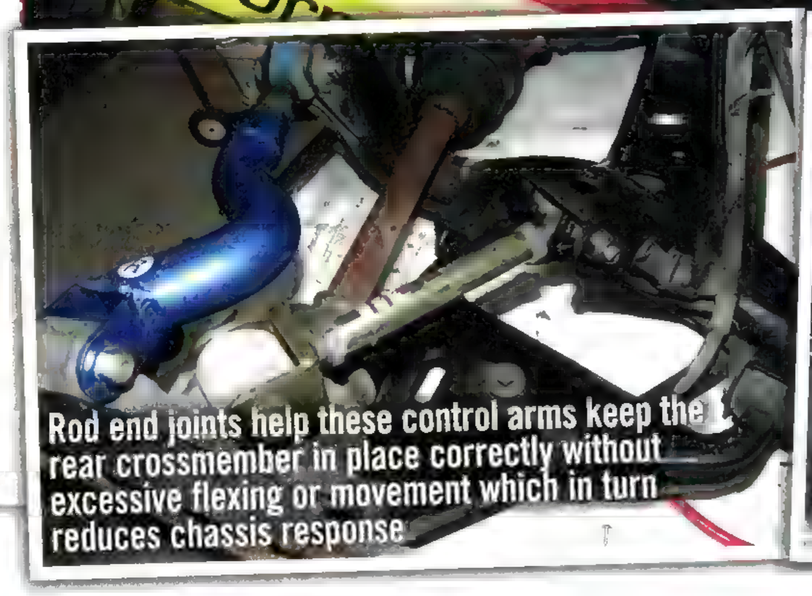
Still nothing beats being able to tie the entire vehicle together with a properly engineered roll-cage. This type of roll-cage links all of the strut towers front and rear completely tying the vehicle together for maximum chassis stiffness and performance. This type of roll-cage complete with metal and rod-end style suspension joints gives the ultimate racecar package, but will not be acceptable for daily street use by a long shot.

FINALLY

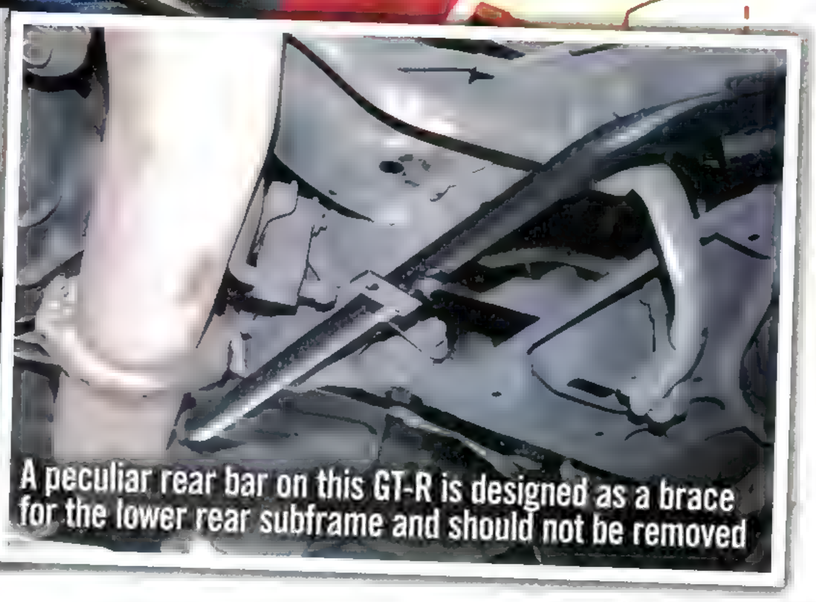
Finding the right balance between handling, stiffness and bracing the chassis is a factor of budget and, of course, required vehicle usage. Even the simplest stiffening modifications of adding improved suspension bushes and front/rear strut braces will give a genuine improvement and somewhere to start when you are on your path to improved handling nirvana.



Side intrusion bars on a roll-cage give safety for the occupant and add great chassis strength



Rod end joints help these control arms keep the rear crossmember in place correctly without excessive flexing or movement which in turn reduces chassis response



A peculiar rear bar on this GT-R is designed as a brace for the lower rear subframe and should not be removed

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Quality Control

Dollar value and quality are not usually associated with Nissan's S13. Mark Veron decided to break the rules...

Words and pics: Rick McDowell

S13

It might not be Australia's most powerful SR20DET, but the list of quality components reads like a Japanese performance shop catalogue

THE WORKS

Whip out the ol' 'DE motor and drop in a low-kilometre SR20DET with a few go fast bits, right? Not in this case-study, folks.

After sourcing a suitable redtop, Mark stripped it all apart, before sending the block and heads off to West Tech Engines. Here the block was acid-bathed, re-bored 20thou' and decked, while the head was totally re-conditioned. The original crank was suitably prepared too and then introduced to Eagle H-beam rods, with 8.5:1 forged CP pistons riding on top.

It all sounds fairly typical, yet the extra attention to detail includes a GReddy sump, ARP rod bolts, remote oil-filter location, braided stainless oil lines, ARP head studs and a Cosworth 1.5mm multi-layer metal head gasket.

No shortcuts were taken with the valve gear either, because although the valves are stock, they are now controlled by Brian Crower springs, titanium retainers and a Tomei rocker stopper kit. Naturally, Tomei Poncams with 256° and 11.5mm lift (IN/EX) were chosen for outright control and performance off boost.

The intake side includes a K&N pod filter and Z32 AFM on a custom intake pipe, while up to 16psi is fed forwards via custom stainless pipework (thanks to the well-known Kermit Engineering) to a GReddy front-mount 'cooler.

The total package is managed by an A'PEXi Power FC computer, tuned to perfection by Sean at Allstar Garage. Tuning is yet to be fully sorted, but the future looks bright to an estimated 450whp or higher.

A key point with the restoration is Mark's abiding persistence to use genuine brand-name components

The custom Red Fire Effect two-pac Debeer multilayer paintwork is amazing

let's be honest here. With S13s so cheap to pick up and parts so readily available at such cheap prices, this is one model of car that truly epitomises the concept of budget thrasher. It's no great secret there are some terrible S13s out there, and while some good ones exist with decent power, fantastic paint, bodykits that actually fit and interiors that don't look like the inside of an illegal bordello, finding one that isn't just a cut above the rest, but in a totally different league, is near impossible. Until now, that is.

Mark Veron picked his S13 up as a white '91-model Q with an SR20DE motor on board and just 130,000 clicks on the dial. The intention at that early stage was to just build a neat streeter, though having read HPI since he was in high school, Mark had developed plenty of plans and ideas to do things differently and even better than what he had seen in print.

The first mods were fairly typical, with the car being lowered, receiving a zorst and a big stereo for the boot. Unfortunately, Mark then lost his licence for six months (as many young lads do), leaving the S13 to sit doing nothing.

Funny thing is, though, there was no better time to strap a turbo onto the original 'DE motor, but it was quickly realised that satisfaction would never be found with some half-baked effort, and so a complete strip down was begun. And we mean complete, as the windows came out, all rubbers came off, trim pieces were removed, the interior was stripped out and more.

Over the months that followed, Brian at Carlisle Smash Repairs got to work on the shell several times to suit Mark's wishes, and along the way the rear spoiler was removed and the bootlid smoothed back. Genuine URAS side skirts from New Zealand were then added and Ganador mirrors prepped up, but the front bar remains stock. Ultimately, the shell was covered in multilayer two-pack Red Fire Effect paintwork, while the bonnet received a custom Cherry Black mix.

It would be a mistake, however, to think that things were now rolling along nicely in some sort of ordered fashion. Far from it, because over a period of about two years the interior was sound deadened, a brand-spankers SR20DET wiring harness introduced, the entire undercarriage sprayed with black stone guard, several types of wheel chosen and then rejected, a five-stud conversion performed... Talk about a saga.

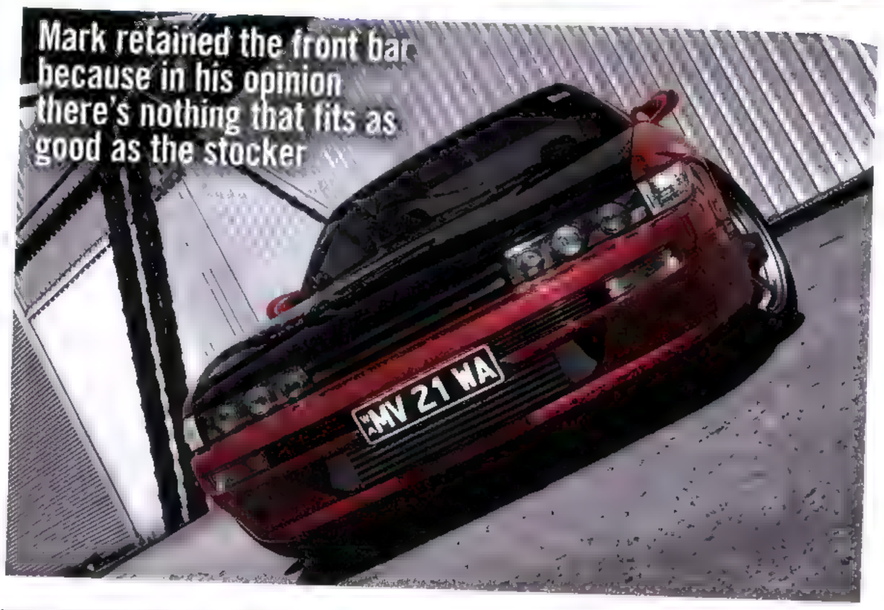
And somewhere along the way the car caught fire and nearly burnt to the ground, only being saved by some quick thinking with a fire-extinguisher, which just happened to be within reach.

A key point with the restoration is Mark's abiding persistence to use genuine brand-name components, and he eventually settled on a set of 17in Koya Drift-Tek rims to enhance the JDM theme. The rims measure 8in wide up front and 9in out back, with the rear guards being rolled to suit. Meanwhile, GAB fully adjustable coil-overs were applied to all four corners, with reconditioned 300ZX alloy calipers and RDA slotted rotors at both ends, too.

Extras include a cosmetic powder-coating for the calipers, Project MU pads, Whiteline swaybars front and rear as well as Whiteline rear sub-frame pineapples and some mods to the steering mechanism.

By this stage, Mark was in deep and the list of engine

It's so refreshing to see the cabin of an S13 that doesn't look like the inside of an illegal brothel



Mark retained the front bar because in his opinion there's nothing that fits as good as the stocker

components being collected and his house was starting to look like the warehouse for a major Japanese performance outfit. The engine build became so extensive, in fact, that we really had no other option but to detail it in a separate breakout story.

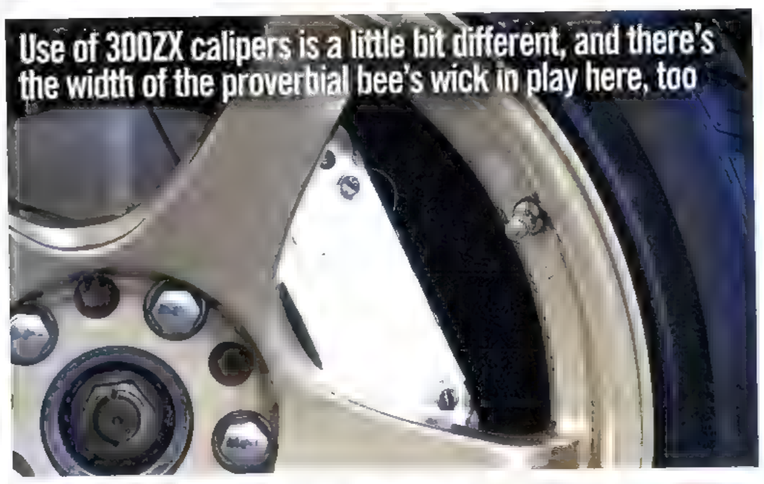
Now, if there's one thing that tends to be common with lesser examples of the S13 species, it is an interior that is just plain grotty, with faded or stained trim and equally faded or cracked plastic trim pieces. Not here.

Jim Lucas Auto Trimmers were asked to help with trimming selected pieces in the S13's cabin, trimming up the roof lining, glove-box, visors and re-upholstering the back seats as well as adding custom touches by way of purple trim inserts for an extra splash of fresh colour. Then there are all the bolt-in parts like East Bear R34 GT-R front seats mounted on Bride low rails, plus Stewart Warner gauges, a Nardi Deep Corn 330mm steering wheel, Nismo leather gear-shift knob and more.

Towards the end of 2009, Mark reached a point with his S13 where, more or less, he could say it was finished. He admits that there is a slight boosting problem, but Sean at Allstar Garage has that one sorted, and a TiAL external gate will be going on soon. All told, this S13 looks just like a well-kept stocker, and that's the image Mark likes to portray as he does drive the car every day. Yes indeed, folks, this is a daily driver.

Yet underneath those classy and subtly stock looks lurks an endless catalogue of premium quality components and attention to detail that is near impossible to replicate. If you reckon your S13 is tidier, neater, more pristine and full of more quality gear than Mark's, well heck, we'd sure like to know about it!

Mark has a few thanks before we go: "My Dad Julian, who taught me how to swing spanners from about six years old, my mum Yvonne for supporting my dream even though she thought it would never be finished, my brother Luke at Auto Technics, my eldest brother Jonny, Brian at Carlisle Smash Repairs, Dan from West Tech Engines, Ryan Purcell, Kai Zscherpel, David Wille, Rob for the tinting, Greg for the help with the diff, members of SilviaWA, Mario from the Ding King and Kermit ENG." «


Use of 300ZX calipers is a little bit different, and there's the width of the proverbial bee's wick in play here, too

A Garrett GT3071R turbo is mounted on a Tomei Expreme stainless manifold

If you reckon your S13 is tidier, neater, more pristine and full of more quality gear than Mark's, we'd sure like to know about it

URAS side skirts and a shaved rear wing are the only body mods needed

VITALS

ENGINE: 2L SR20DET six-cylinder turbo
POWER: 450hp ATW
POWER FROM FACTORY: 205hp
POWER TO WEIGHT: 0.26kW/kg

ENGINE HARDWARE

Block acid-bathed, re-bored 20thou' and decked, Tomei oil block, GReddy sump and remote oil filter re-location, stock crank with polished journals, forged CP 20thou'-over pistons (8.5:1) and rings, ACL Race-series bearings, ARP rod bolts, Eagle H-beam rods, fully reconditioned head decked, ARP head studs, Cosworth 1.5mm head gasket, Brian Crower valve-spring kit with titanium retainers, Tomei rocker-arm stoppers and Poncams (256°, 11mm), Garrett GT3071R turbo on Tomei Expreme stainless manifold, custom 3in intake pipe with K&N air filter, GReddy 600mm front-mount intercooler, custom stainless inter-cooler plumbing and plumbed-back GReddy Type R BOV, N/A throttle-body, Bosch 040 in-tank pump, 300ZX fuel filter, B&M inline fuel-pressure gauge, Nismo 740cc injectors and adjustable FPR, A'PEXi Power FC computer, Z32 airflow meter, SplitFire coils, custom stainless dump pipe into custom 3in stainless mandrel-bent exhaust system with X-Force 3in cat and twin 2.5in cannons, modified stock catch can, various Earls braided lines and fittings, Odyssey battery re-located to boot, Koyo 53mm alloy radiator, Nismo thermostat

DRIVETRAIN

Lightened flywheel, Exedy three-puck brass-button clutch assembly, R200 diff with S15 helical torsen centre

BRAKES/SUSPENSION

GAB adjustable coil-overs, Whiteline sway-bars front and back, GReddy strut brace, Nismo front power brace, upgraded steer-ing-rack tie-rods, Whiteline sub-frame pine-apples, R33 Skyline handbrake set-up, reconditioned 300ZX alloy calipers power-coated white all-round with RDA slotted rotors and Project Mu brake pads

WHEELS/TYRES

17x8in front and 17x9in Koya Drift-Tek wheels wrapped in 235 front and 255 rear Maxxis tyres, five-stud conversion

BODYWORK

URAS side skirts, Ganador mirrors, spoiler removed, rolled rear guards, custom stain-less steel rear flame baffle, custom Red Fire Effect two-pack Debeer multilayer paintwork with custom Cherry Black for bonnet

INTERIOR

Full re-trim throughout including rear seats, roof-lining, carpet, door trims, visors, centre console, and glove-box with custom purple insert pieces, East Bear R34 GT-R front seats on Bride Low rails, Nardi Deep Corn 330mm steering wheel, Nismo leather gear-shift knob, fire-extin-guisher, A'PEXi Power FC hand controller, custom DIN set-up in centre console with Stewart Warner gauges for oil pressure, oil temperature and water temperature, boost gauge on driver's A-pillar

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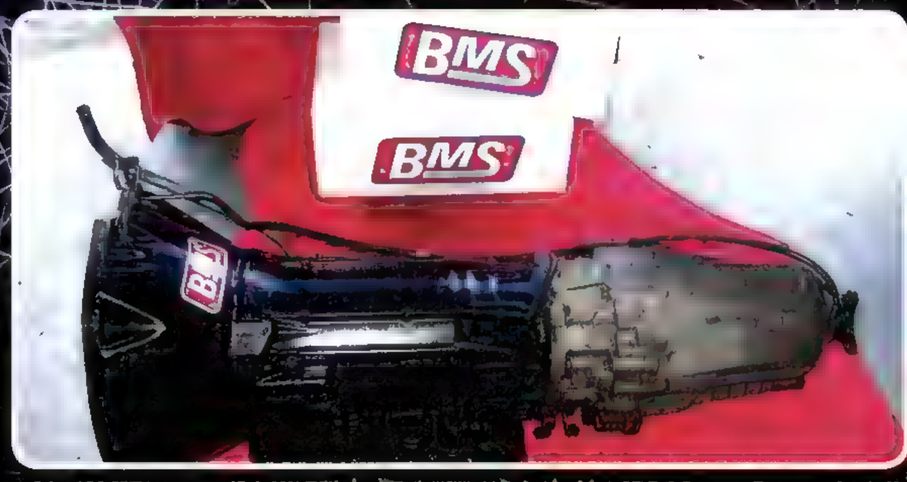

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Words and pics: Rick McDowell

With up to 605rwhp and a low 11sec time-slip courtesy of a JUN-based RB27DET engine, this Stagea from Perth sure ain't no family wagon

Stagea Fright

A full-house JUN 2.7L engine based on a brand-spankers N1 block topped off with a single TO4Z and controlled by Autronic is worth over 600rwhp

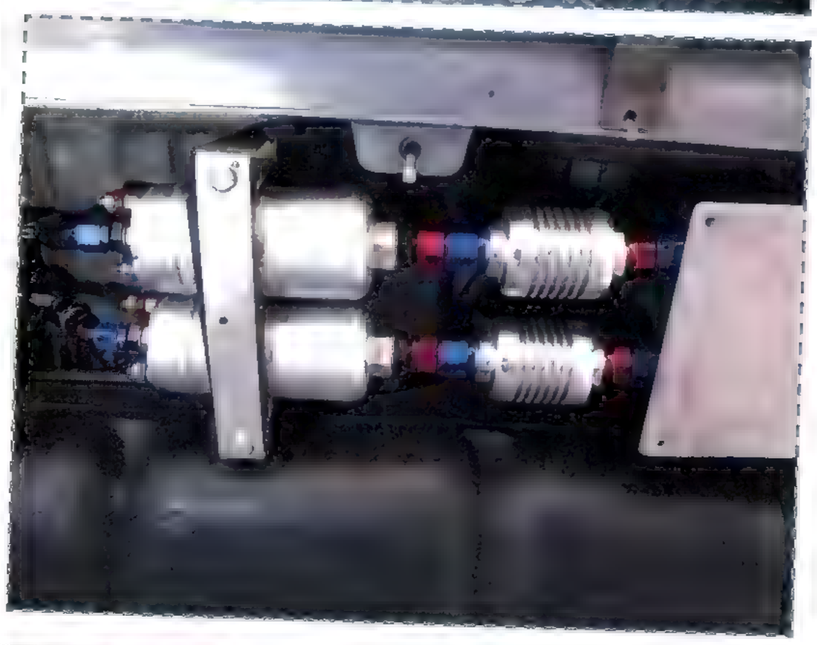
STAGEA DID-YOU-KNOW

- The Stagea was developed by the Nissan Skyline Crossover Team
- Masa Motorsport produces an R34 GT-R front-end conversion kit for the WC34 Stagea
- The Stagea was based on the Nissan Stagea / Laurel Wagon
- There were over 17 official variants of the Series 1 Stagea, mixing aero, options, AWD and engine choice, from the X Aero Selection to the G Four

There are built RB26DET engines and then there are those using a JUN 2.7L billet and counterweighted crankshaft, JUN 2.7L rods and custom CP pistons

Family wagon with sports car handling or sports car with luggage capacity?

The stock RB26 gearbox didn't last long, and this was with stock RB26DETT internals, too



It would be fair to say that Nissan's Stagea never really took Australia the way some importers might have wanted it to. Certainly, there are a few of the wagons around, yet the combination of GT-R-spec AWD in some instances combined with 'just' the RB25DET engine and all wrapped up in a wagon body gives the Stagea something of an identity crisis. Is it a sports car with carrying capacity, or a family wagon with sports-car handling?

Those who have gone down the Stagea road don't really care about what mould the model falls into, because as any Stagea owner can verify they are just a fantastic all-rounder with plenty of positive points. Being able to carry the family, produce, parts or the golf clubs is really only the cherry on top of the cake. Many Stagea owners don't hesitate to modify their unique wagon either, and most opt for the bodykit and big wheels look, which, admittedly, does turn the model into a real head-turner.

Brad Pilkington over in Perth, on the other hand, is really only interested in performance, and what he has done to his '96-model Stagea RS Four pushes any form of identity for the model into totally new territory.

After spending his formative years tweaking VL Commodores, Brad ultimately ended up taking on an unfinished RB26DETT VL project. While the '26 remained stock internally, the whole VL adventure took three years to complete and broke plenty of drivetrain components along the way before the engine was swapped out and into the Stagea. Brad isn't quite sure why he bought the Nissan wagon in the first place, though wanting to be different and to stand out in the R32/33 jungle was important.

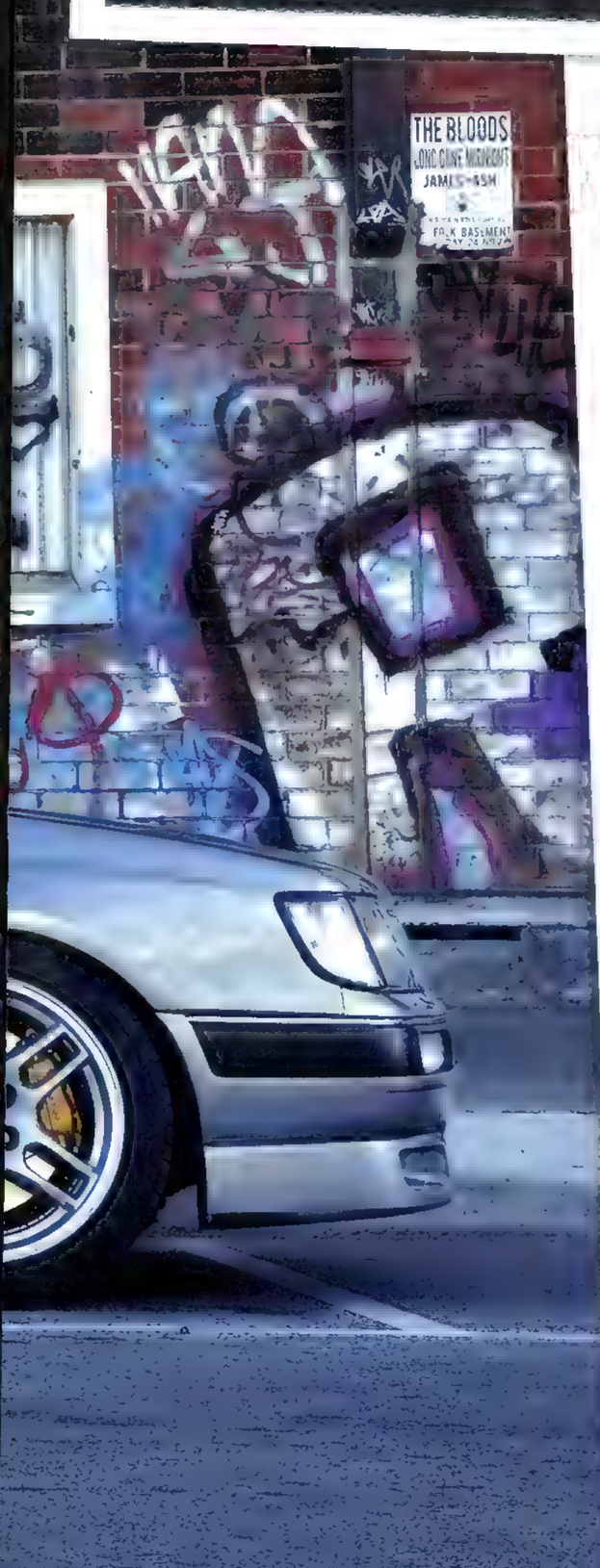
Now, just in case you didn't already know, the RB26DETT motor from his VL efforts replaced the Stagea's stock RB25DET engine (remember too, that only the '98 onwards Stagea model range received the NEO '25 motor). Unfortunately, a cracked ring land brought proceedings to an abrupt halt, though with the wagon off the road, the motor apart and a fresh start beckoning, you can perhaps guess the rest. Still, there are built RB26DET engines and then there are those using a JUN 2.7L billet and counter-weighted crankshaft, followed by JUN 2.7L rods and custom CP pistons.

The bottom end actually came in for quite a bit of fastidious preparation work, and the block begun life as a brand-spankers R34 N1 lump from Nissan. A mild 10thou' rebore and hone were performed to suit the 87mm pistons and an oil restrictor added to help keep more lubricant down below, while a custom rear head drain to the sump was plumbed up, too. That's not forgetting the JUN oil pump, along with a 10L enlarged sump complete with a baffle and trap door.

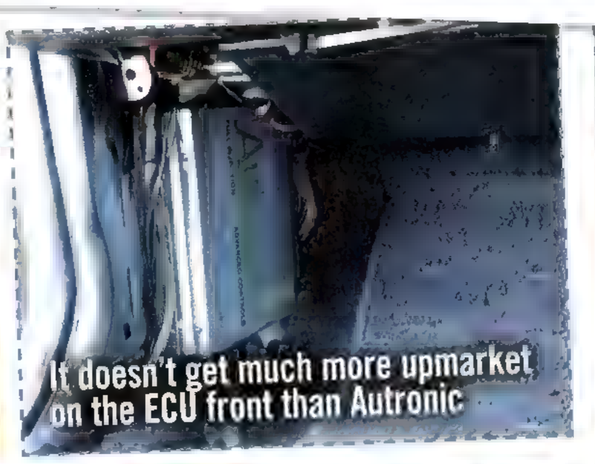
Brad wasn't messing around up top either, with the RB26 head extensively ported, polished and faced. With JUN head studs, an HKS drag-spec metal head gasket, Ferrea 1mm oversize valves, re-ground valve seats, JUN heavy-duty valve springs, JUN titanium retainers, Tomei valve guides and Tomei cam caps, no expense was spared. Not surprisingly, custom 'JUN-based' camshafts are in use along with JUN cam gears, but don't ask for specs or source...

The all-important forced induction, meanwhile, comes courtesy of an HKS T04Z 0.81 turbo perched on a stainless Trust T78/88 high-mount manifold. Plumbed in alongside is a TiAL 44mm external wastegate that runs a custom 50mm screamer pipe, while a custom 4in dump from the turbo heads rear-wards into a custom single 3.5in stainless exhaust system with a Manta 3.5in muffler plus a Magnaflow 3.5in rear cannon.

And so to the fuel system, which starts with twin Goss in-tank fuel pumps that feed a 3L custom surge pot. This is sucked on relentlessly by twin Bosch 044 main pumps that feed a Sard twin-entry fuel rail run-ning Sard 1000cc injectors. The whole deal is con-nected together by a variety of Dash 6 and Dash 8



A 10L enlarged sump comes complete with a baffle and trap door


It doesn't get much more upmarket on the ECU front than Autronic

Teflon fittings and lines, with a Sard fuel pressure regulator keeping it all in check. Thanks to Mick Munroe at Ovaboost, upwards of 600rwhp has been seen with the AWD system switched off.

It'd be easy to read all of the above and think that Brad has done a top job creating one of the wildest Stageas we've seen on Aussie shores. The reality, however, is that Brad's dad, Steve, did a fair amount of work on the car. Now Steve just happens to be the clutch man for the 5sec Pilkington AA/FC Monte Carlo funny car at the Perth Motorplex. Without Steve's engineering mind and expertise, the Stagea probably wouldn't have developed into what it is today.

Brad is also grateful to mates like Chris, John and Nick – many of whom have had their own cars featured in these pages over the years – for their moral support.

And speaking of the drags, it was an attempt to drop his Stagea into the high 10s that cost Brad the factory RB26DETT gearbox he had transplanted into the wagon in the early days. Incidentally, considering the wagon weighs 1700kg with driver and fuel on board, the 11.33@123.3mph PB with 'just' 560rwhp at 18psi is remarkable.

Rather than go for some patch up job under the floor, an R32 GT-R case filled with a complete PPG straight-cut dog gearset now resides under the floor fed by an NPC twin-plate clutch and lightweight flywheel assembly.

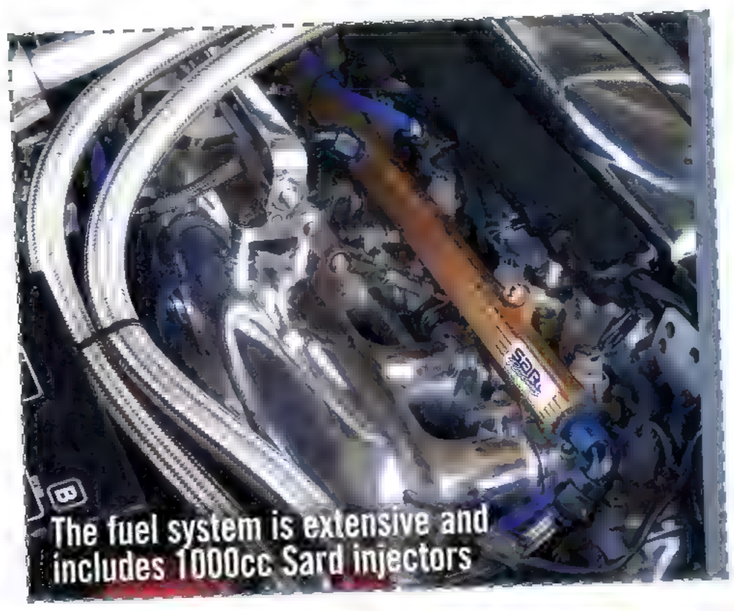
The remainder of the drivetrain is a smorgasbord of GT-R parts, and that includes a complete R32 GT-R rear cradle. Suspension and brake components are all GT-R lineage, too, and that includes R34 GT-R Brembo calipers up front, along with DBA 5000 alloy discs.

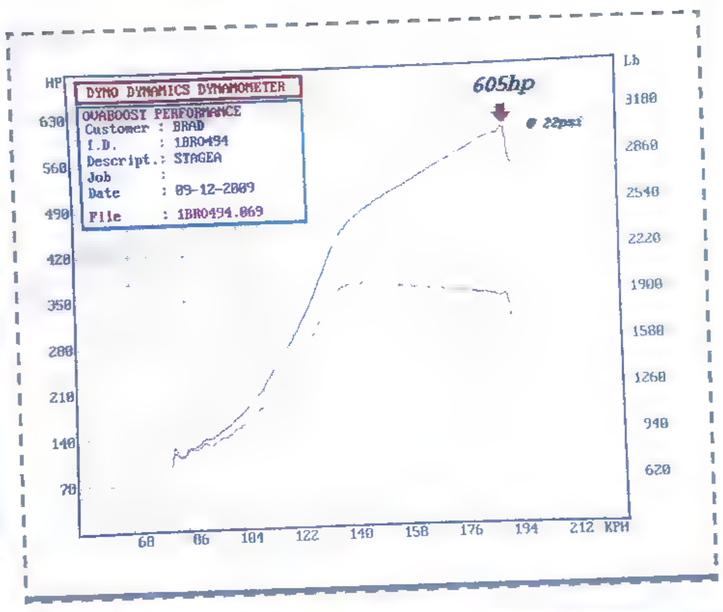
Apart from the usual gauges and such like, Brad hasn't focused his modifying efforts on the cabin and has more recently directed his performance addiction in two new directions.

First up, there's an R32 GT-R now sitting in the Pilkington garage that is being built up as a purpose-built track car. The plan is to 'donate' the Stagea's JUN-based engine for the coupe, while the daily driver wagon is to get an RB30 bottom end topped off with a '26 head and GT3076R turbo setup. It sounds like the sort of performance double act for which we'd like to acquire front row seats. No doubt the encore will be just as good, too.

Before we go, Brad naturally has a few shoutouts to: "My old man Steve, who has never stopped helping me along the way, Chris and John for the advice and lending of tools and engine hoist for the last four years, and Nick for the advice and lending of vital parts to give me chance to run at the last Hi-Tech drags."

Thanks also to "Mick and Brad from Ovaboost Performance for the tuning and help they are always willing to give, Danny at Performance Modifications for the machine work and quick turnaround times, and anyone I've forgotten, you know who you are". «


The fuel system is extensive and includes 1000cc Sard injectors



Check out the rear tyre smoke as Brad tries to get 600rwhp in wagon form off the line

VITALS

ENGINE: 2.7L RB26DETT six-cylinder turbo
POWER: 605rwhp
POWER FROM FACTORY: 280hp
POWER TO WEIGHT: 0.28kW/kg

» ENGINE HARDWARE

R34 N1 block rebored 10thou' and honed, JUN oil pump, custom 10L enlarged sump with baffle and trap door, custom head oil restrictor and custom rear head drain to sump, JUN 2.7L billet and counterweighted crankshaft, JUN 2.7L rods, custom CP pistons and rings, ARP rod bolts, RB26 head extensively ported, polished and faced, HKS drag-spec metal head gasket, Ferrea 1mm oversize valves, re-ground valve seats, JUN heavy-duty valve-springs, JUN titanium retainers, Tomei valve guides and cam caps, custom camshafts, JUN cam gears (IN/EX), HKS T04Z 0.81 turbo on Trust stainless T78/88 high-mount manifold, TiAL 44mm external wastegate, custom 4in dump from turbo into custom single 3.5in stainless exhaust system with Manta 3.5in muffler and Magnaflow 3.5in rear cannon muffler, custom 50mm screamer pipe from wastegate, custom engine bay intake plumbing including 4in aluminium intake pipe with K&N air filter, Trust Drag GT-R 140mm bar/plate front-mount intercooler, two Goss in-tank fuel pumps to 3L custom surge pot, two Bosch 044 main pumps, Sard twin-entry fuel rail, 1000cc injectors and fuel-pressure regulator, teflon fittings and lines, Autronic SMC ECU and CDI 500r, Mercury CDI coil-packs, N1 water pump, ATI harmonic balancer, JUN head stud kit, ARP main studs, Gates timing belt, six Innovative EGT sensors (one in each exhaust runner), alloy catch can with dash 8 braided lines

» DRIVETRAIN

NPC twin-plate clutch and lightweight flywheel assembly with conversion to R32 GT-R clutch vacuum booster, R32 GT-R case with full 1–5 PPG straight-cut dog gearset, R32 GT-R axles modified

» BRAKES/SUSPENSION

R34 GT-R Brembo calipers and DBA 5000 alloy hat 324mm rotors (Brembo pads) front, Whiteline springs, Bilstein shocks, Stagea strut brace and ARC front swaybar front, R32 GT-R calipers and 300mm rotors (Bendix Ultimate pads) rear, complete R32 GT-R rear cradle custom fitted with GT-R style Bilstein shocks, Whiteline springs, modified R32 GT-R axles, Whiteline rear swaybar, R33 GT-R brake master cylinder, Whiteline adjustable bushes on every suspension component

» WHEELS/TYRES

17x9in R33 GT-R wheels, 235/45 Achilles ATR Sport tyres

» BODYWORK

Dayz rear bumper lip and rear spoiler, Nismo side skirts, Nismo clear front and side indicators

» INTERIOR

Autech 260RS MoMo steering wheel, Defi DIN unit custom fitted to centre console with oil temp, water temp and oil pressure gauges, Innovative XD16 wideband O^2 gauge kit on dash, Auto Meter Sports Comp boost gauge, Innovative LC1 wideband data-logger and twin Innovative TC-4 EGT data-loggers, GT-R handbrake conversion, Kenwood CD player

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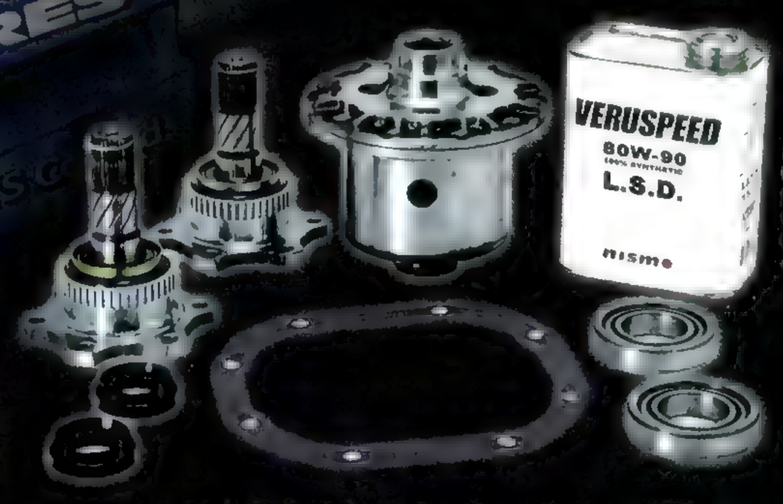

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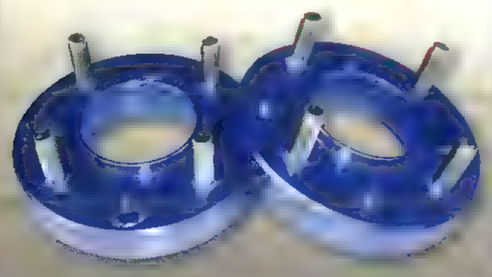

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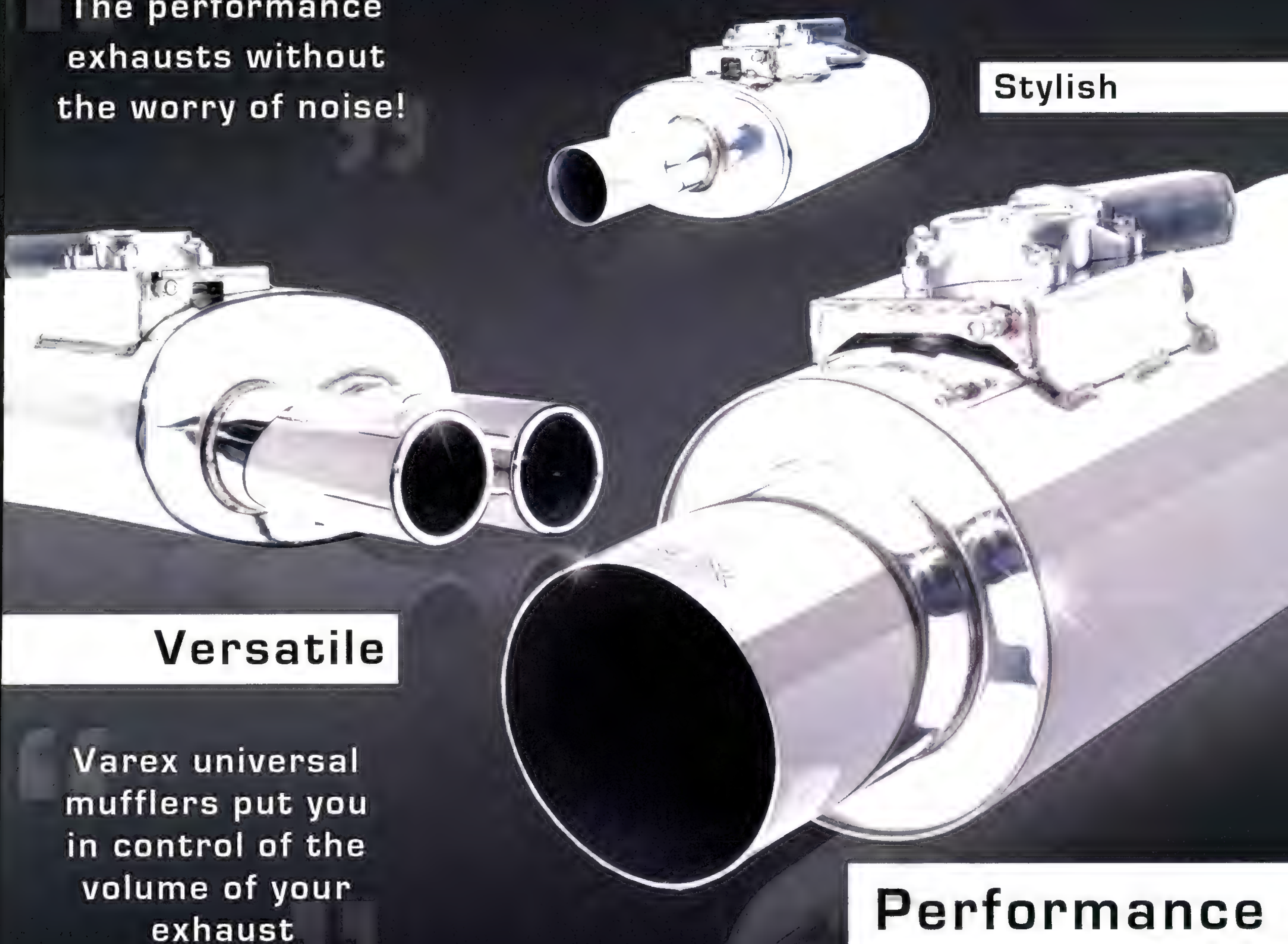

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JDM Super-Tour

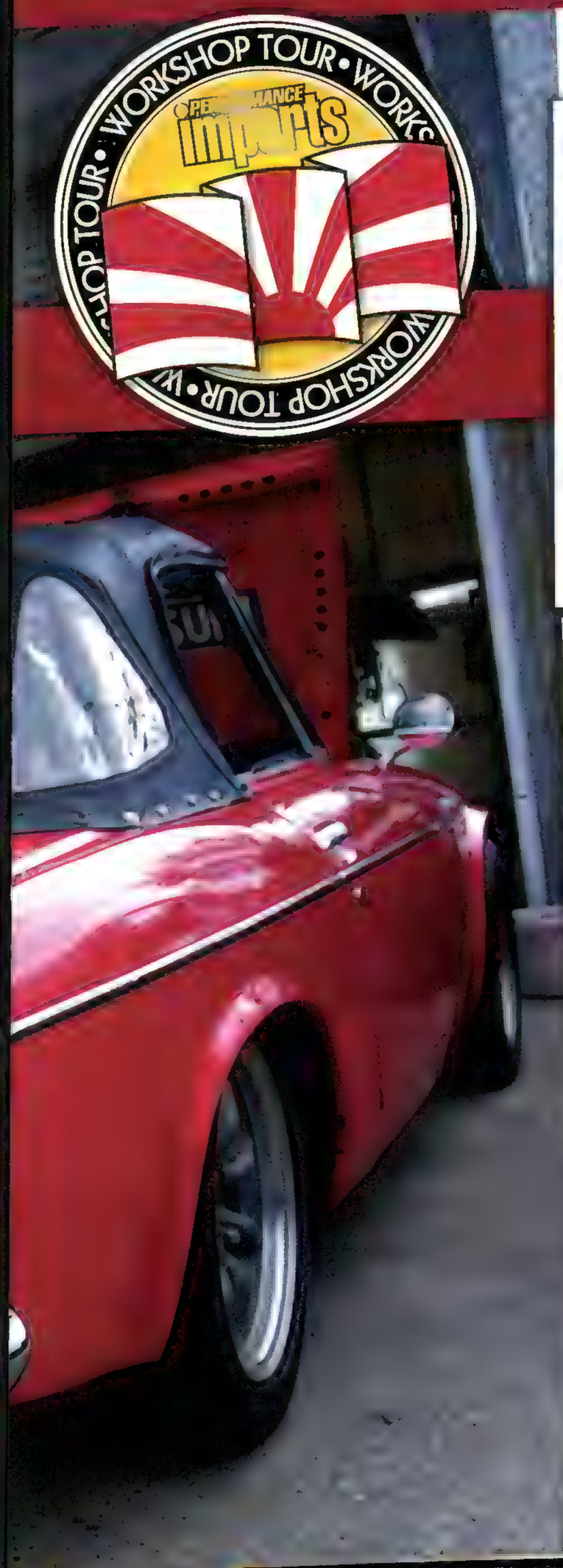
Get your bib ready as we visit five of Japan's finest workshops and storefronts

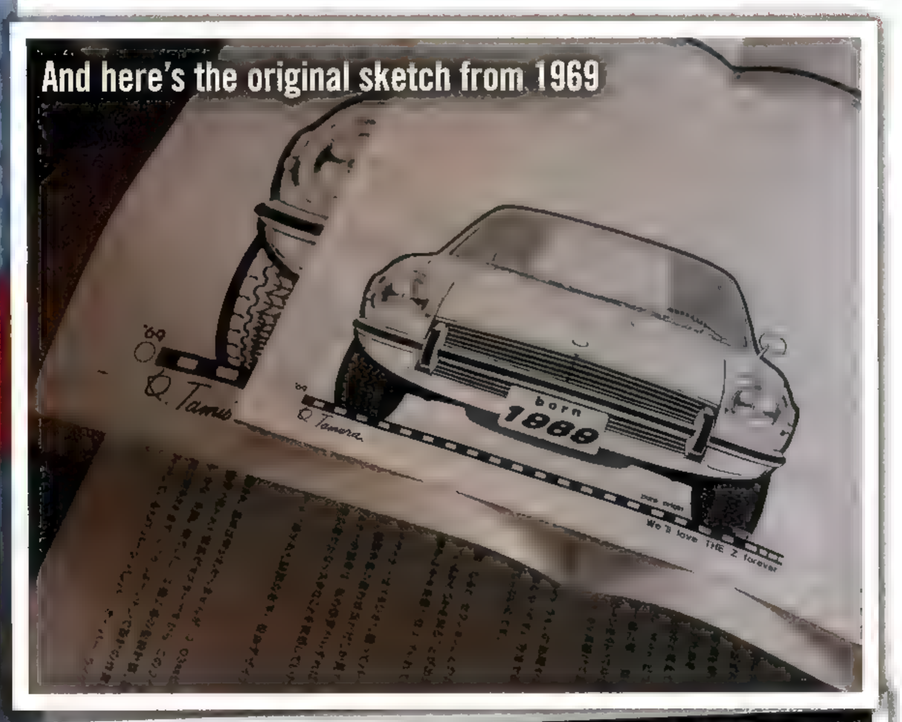
Words and pics: Dino Dalle Carbonare

Hard to discern, but this is a super-rare race edition of the 432 (yon-san-ni), owned by Arai-san. It's a solid year away from completion, even though the S20 is ready

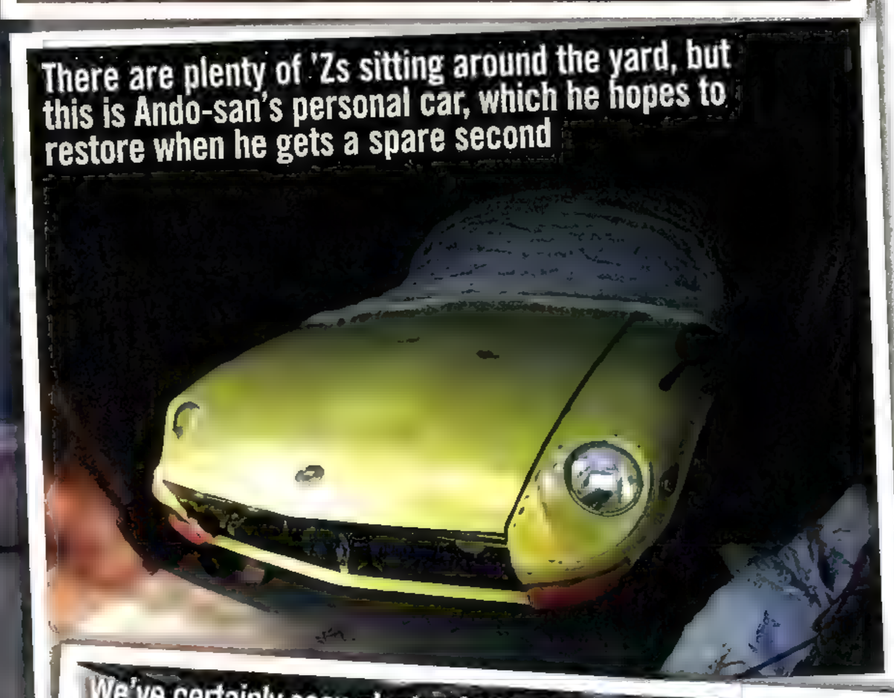
From factory the 2L single-cammer U20 came with 145hp, a lot for back in the day, but this one's putting out a lot more thanks to strengthened internals and beautiful sounding Solex carbs with trumpets

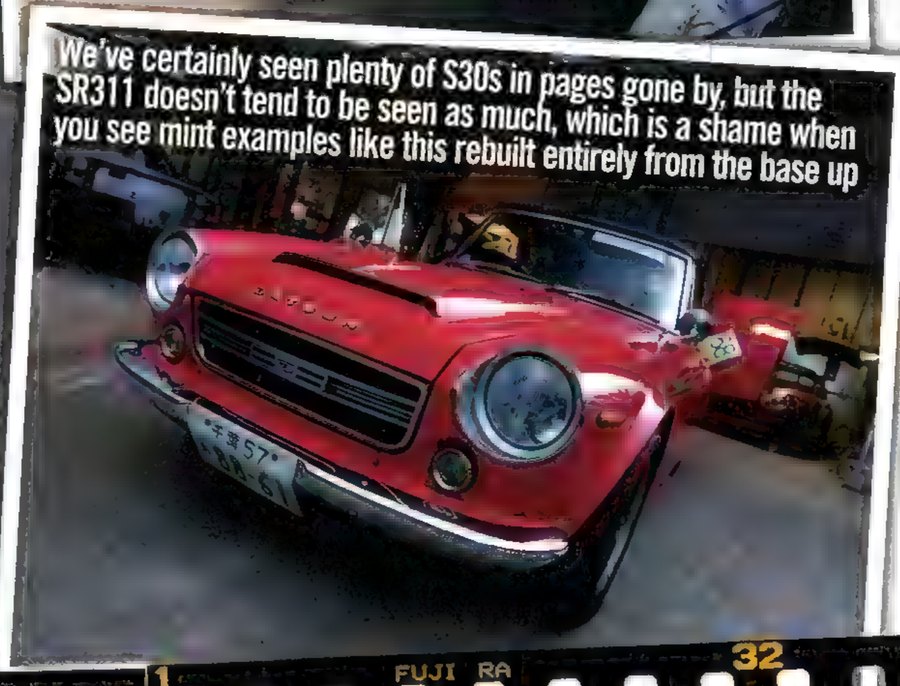
As original parts for these models get harder to source, it's becoming increasingly difficult to restore them to showroom condition





And here's the original sketch from 1969


There are plenty of 'Zs sitting around the yard, but this is Ando-san's personal car, which he hopes to restore when he gets a spare second


We've certainly seen plenty of S30s in pages gone by, but the SR311 doesn't tend to be seen as much, which is a shame when you see mint examples like this rebuilt entirely from the base up

TA AUTO

Places like TA Auto are where miracles happen on a daily basis. If it wasn't for people like Ando-san, the owner of this car restoration shop, vintage and historical classics would be forever lost. Ando's reputation precedes him. He is one of the most respected restorers in Japan, bringing cars back to life for enthusiasts young and old alike.

When Nissan wants a car from its own collection restored or fixed up, they turn to Ando, who was the man behind the KPGC10 Hakosuka GT-R that was on display at the Nissan Gallery during the Skyline's 50th anniversary. But it's the Fairlady Z that has always inspired Ando-san the most, and on top of all the other platforms he works on it's the S30 that takes precedence at his shop.

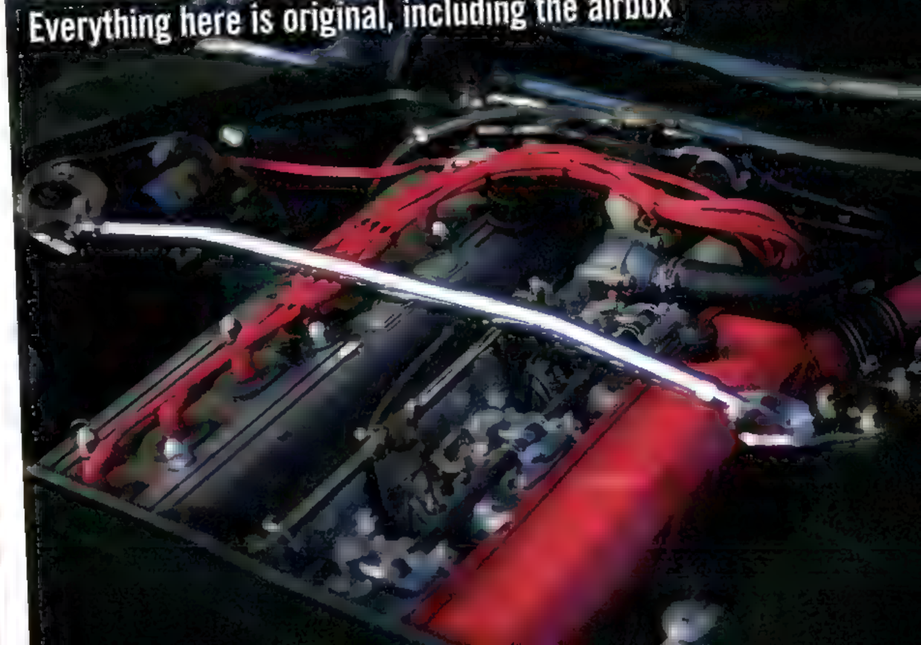
He is a true specialist when it comes to S30s and has restored most of the limited edition Japan-only Z432 road and race versions out there. In fact, his latest creation is his own car, a Z432R replica running a modified S20 straight-six engine, the same lump that was used in the Skyline 2000 GT-R.

The area surrounding his workshop resembles nothing short of a junkyard, except every single car and part that has accumulated over the decades is an S30 or from and S30. Deep in a secondary garage is the first S30 Ando ever owned, a canary yellow one that has been sitting for many years waiting for that restoration that will bring it back to its former glory.

As Ando explains, however, he is far too busy with customer cars to be dedicating any time to that old thing! He has just completed the first stages in what will be a two-year restoration on a yet another rare Z432 road car.

With the chassis sorted it is the body that will be getting all of his attention next, and like a true craftsman he does everything by hand with old tools, using his talent to fix up and recreate what to the untrained eye looks like nothing more than a pile of rusted out steel.

Abe-san was the chief clay modeller

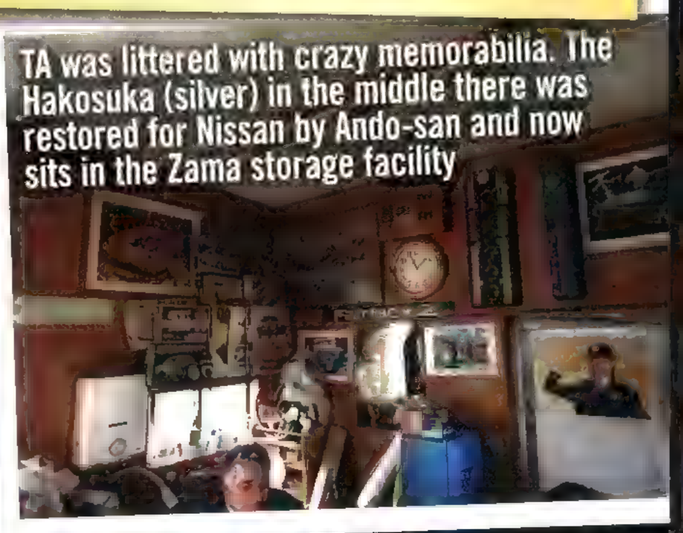

Everything here is original, including the airbox

Here's a rebuilt 432Z S30, which was a JDM model that used the S20 2L as seen in the GT-Rs of the day. It was immaculate

IN THE BEGINNING

Known as 'Circle Z' the 'Z started coming to life in 1965, and it would be another four years before it was seen with a price-tag on it in both Japan and the USA.

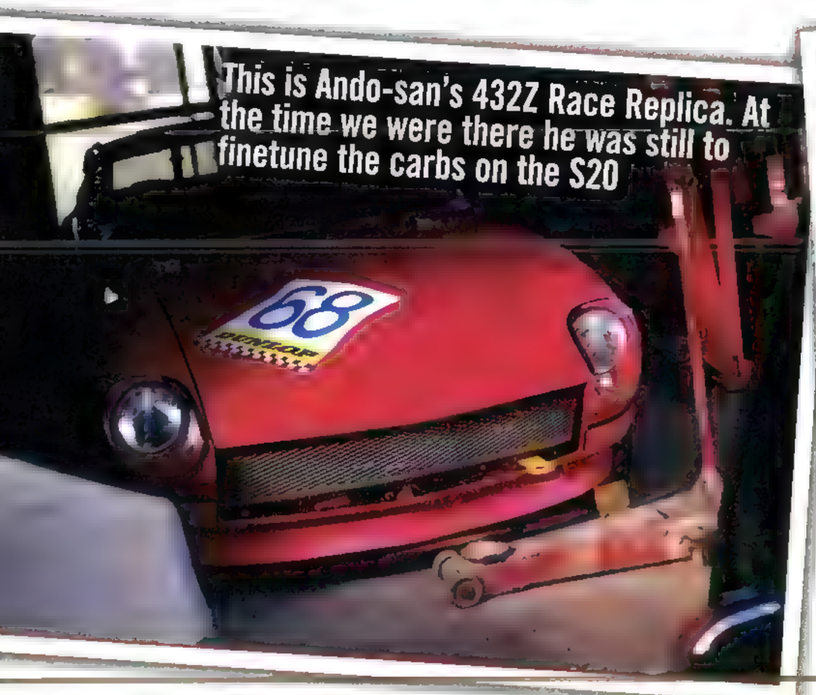
According to the 'Z experts gathered at TA, there was much discussion with top Nissan management regarding the styling. The idea was to build a car to appeal to the US market, a smooth, sleek two-seater fastback. Eventually, the dimensions of the car were increased, the body lowered 20mm and widened to give it the correct stance and appeal.



TA was littered with crazy memorabilia. The Hakosuka (silver) in the middle there was restored for Nissan by Ando-san and now sits in the Zama storage facility

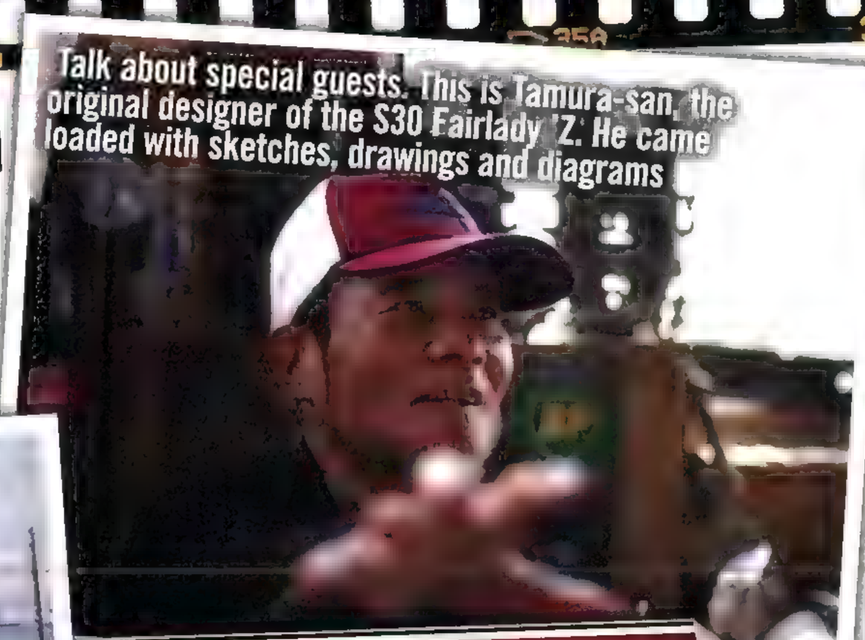
Can you guess where this grille is from? Yep, a KPGC10

When Nissan wants a car from its own collection restored or fixed up, they turn to Ando



This is Ando-san's 432Z Race Replica. At the time we were there he was still to finetune the carbs on the S20

The workshop itself is just around the corner from the recently developed Sodegaura Forest Raceway



Talk about special guests. This is Tamura-san, the original designer of the S30 Fairlady 'Z. He came loaded with sketches, drawings and diagrams

MORE?

If you haven't had your full S30 fix, tune in next month when we look at Tetsu Takakamo and his Ultimate Pro Motoring Shop, located out in the Japanese countryside. Apart from the sheer scale of the place, and its interesting 'car-evator', it had everything an S30 fan could wish for and more.

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6A12-13TT Galant Manual 1/2 Cut

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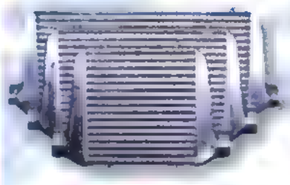

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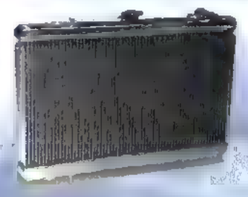

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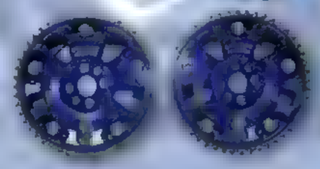

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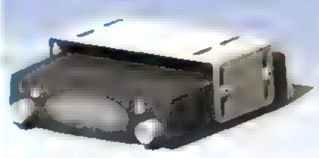

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RB25 Cam Cover

Some pictures for illustration purposes.

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AUTO-SELECT

It seems hard to believe, but a lot of Japan's well known tuning shops came from very humble beginnings. Auto Select is one of them. Now one of the most respected establishments catering to tuning of a variety of cars, Auto Select came to be pretty much out of chance.

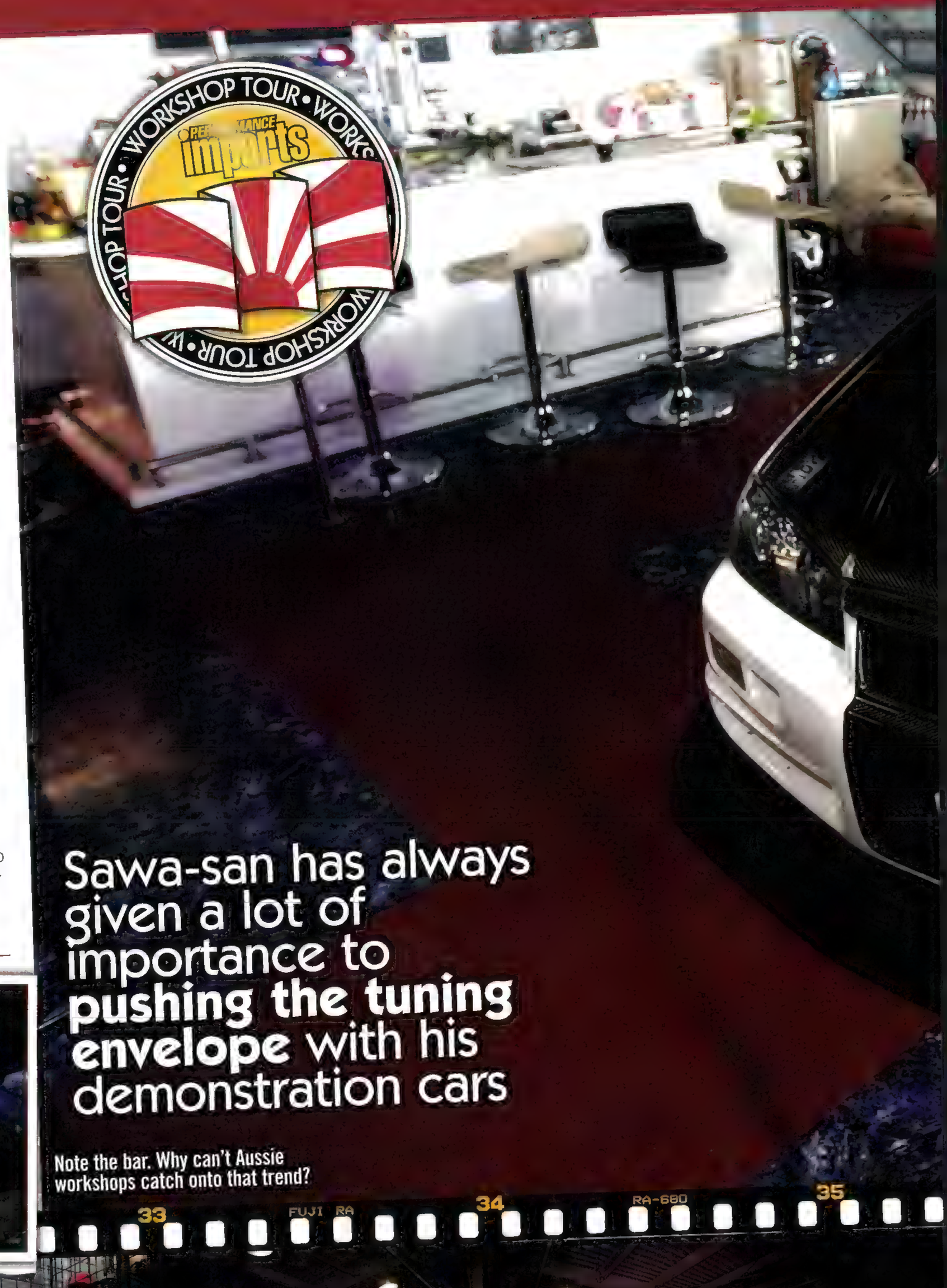
Sawa-san, the president, originally got into cars in the late '70s experimenting and tuning them for fun, quickly becoming quite the master at finetuning carburettors. He started to fix up his friends' cars and quickly made a name for himself in the Osaka area as the person to see. By the mid-'80s his customer base grew, and that is when he decided to set up the Auto Select shop together with his brother.

Sawa-san has always given a lot of importance to pushing the tuning envelope with his demonstration cars, cars like the Yellow Shark R34 GT-R featured last month and their FD3S. A lot can be learned from racing these cars on track and pushing for the fastest times at time-attack events, but Sawa-san approaches street tuning from a slightly different angle.

He believes that before anything is done to the engine an owner needs to address the suspension and brakes of his car, as power is pretty pointless without control. He then tries to help his customers come up with a tune that will suit them and their driving style with special emphasis on balance. Making things economical is also important, a trait born from the fact Sawa-san's friends had little money for modification back in the day.

In Osaka they are the shop to go to and over the years have become the established GT-R specialist, with a large customer base that hangs around the shop on the weekends for a chat while they are getting their car serviced. It's a true hashiriya (street racer) shop.

CONTACT: WWW.AUTOSELECT.CO.JP


WORKSHOP TOUR • WORKSHOP TOUR • WORKSHOP TOUR •
imports
Sawa-san has always given a lot of importance to pushing the tuning envelope with his demonstration cars
Note the bar. Why can't Aussie workshops catch onto that trend?
33
FUJI RA
34
RA-680
35
34A
35

The Yellow Shark cars are primarily for R&D. The wangan, running from Kobe to Kansai Airport, is the testing ground, also being a little twistier than the highways around Tokyo

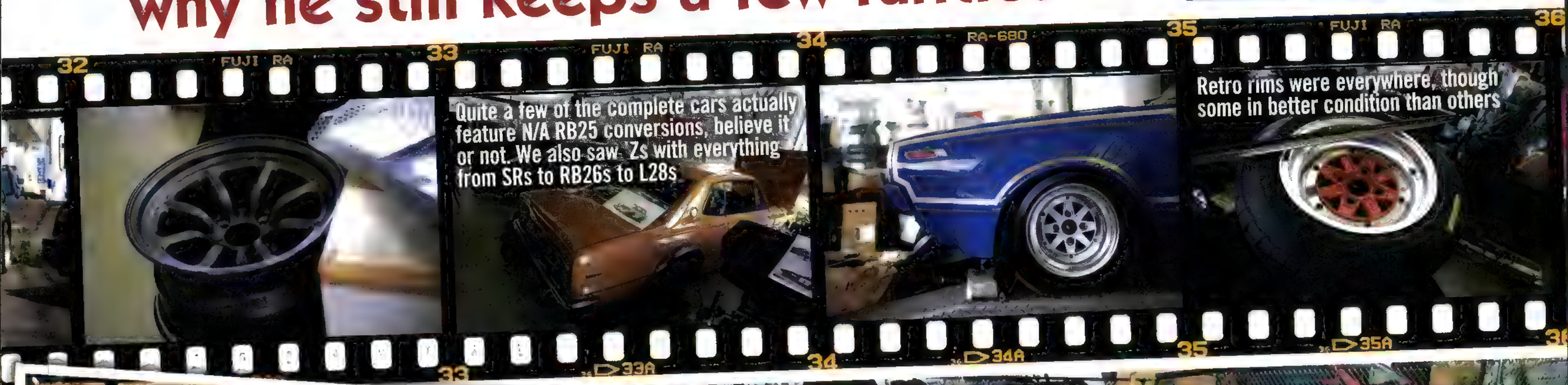
THE BEAST

We were blown away by this RB26 Z at this year's Tokyo Auto Salon and will have a full feature in an upcoming issue.

The car features a full rebuild, including T04Z for 600hp, F50 brakes front with F430 rears, 295 rear tyres, crazy fuelling set-up, interior, and all in just over a tonne worth of vehicle.

Funnily enough, builder Sawasaki-san told us that despite all this power that the 'Z is actually very sedate to drive at low-RPM and only really starts to go bonkers in the early midrange. We can only imagine...

Watanabe also appreciates the unmolested look and feel of cars, which is **why he still keeps a few rarities**


32
FUJI RA
33
FUJI RA
Quite a few of the complete cars actually feature N/A RB25 conversions, believe it or not. We also saw 'Zs with everything from SRs to RB26s to L28s
34
RA-680
35
FUJI RA
Retro rims were everywhere, though some in better condition than others
33A
34A
35A

RA often shows up at the Tokyo Nostalgic Show at the Big Sight in Odaiba. In fact, that's where we first spotted their cars back in 2007

Rocky has become famous on the 'internets' largely for their boso-style external oil coolers, though only one or two cars featured them during our visit

Rocky complete cars feature all-new suspension and braking as well, as can be evidenced from these front Brembos

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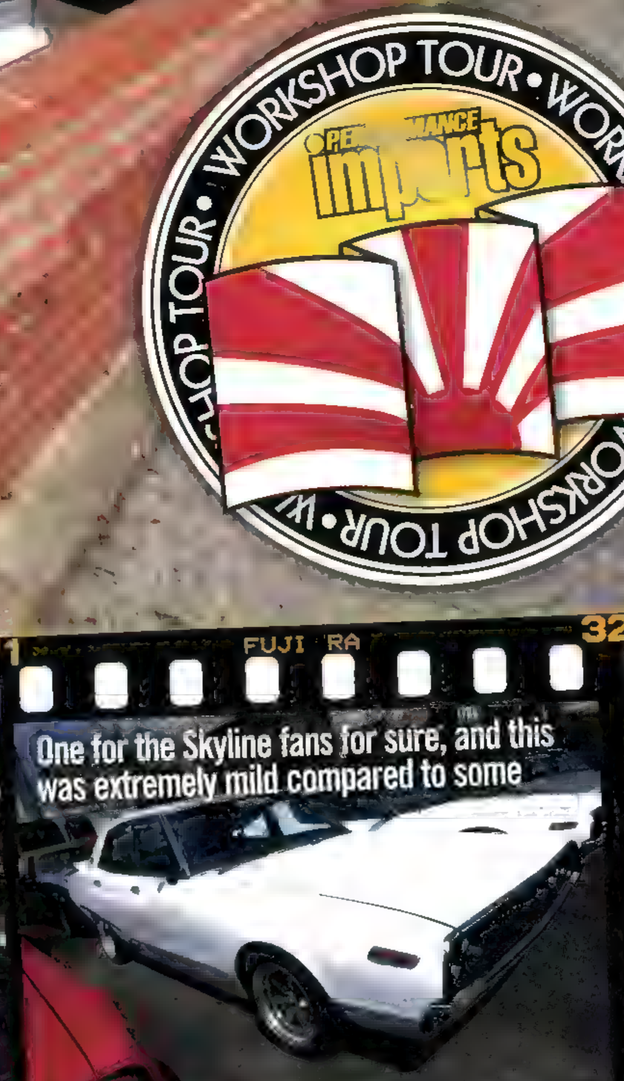


After seeing their cars at various shows, we've been dying to get to Rocky Auto. We were not disappointed upon arrival

It looks like that brick wall is just the perfect height

ROCKY AUTO

When it comes to classic car restoration, Rocky Auto approaches things in a somewhat unorthodox way. Forget your period specific wheels and OEM paintjobs, this is a place where classic cars meet modern day influences.

Watanabe-san, the owner and founder of this very special place, loves classics cars through and through but doesn't see why he needs to put up with underpowered motors and outright dangerous handling and brakes. He has pioneered the art of modernising vintage cars, taking a particular interest in Nissans.

The car yard outside the Rocky Auto showroom will have most enthusiasts' jaws drop straight to the ground, as there must be no fewer than 70 cars on display, either up for sale or awaiting a full restoration or, to better put it, transformation.

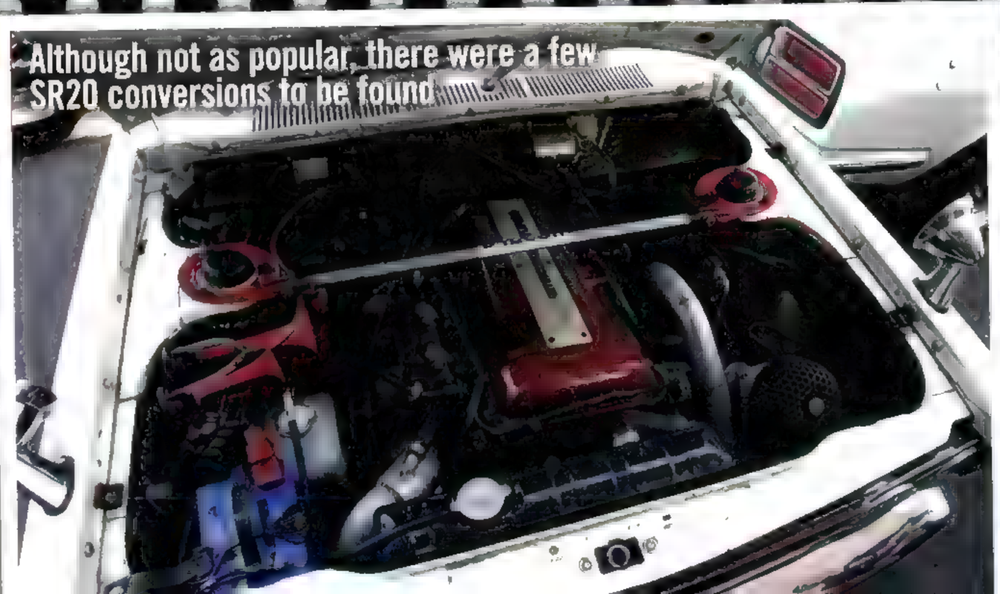
Watanbe-san loves the RB engine and has dropped turbocharged and naturally aspirated versions into S30 and various generations of Skylines. His latest demo car, shown at this year's Tokyo Auto Salon, is the perfect example of just how crazy his ideas can get – a 600ps RB26 into a lightweight S30 chassis that has been reinforced and built from the ground up.

He has recently begun building a lot of N/A RB30 engines, appreciated by a lot of his customers for having an old-school feel coupled with the power delivery and efficiency of a more modern motor. On top of the impressive line-up of cars it's the workshop where all the magic happens, like the spotless S30 bare chassis that was getting a new set of Brembo brakes installed ready to take the savage power of an RB26.

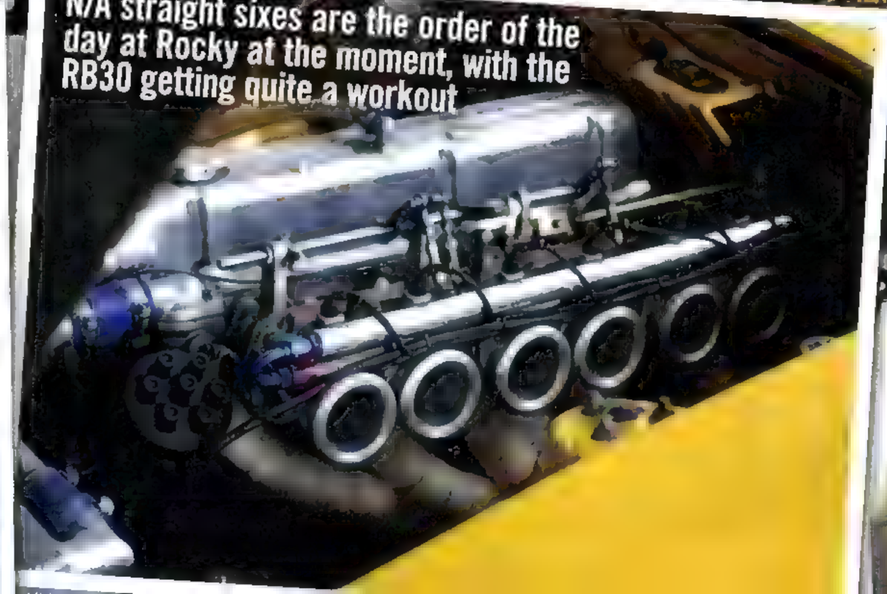
Watanabe also appreciates the unmolested look and feel of cars, which is why he still keeps a few rarities like a few 240ZGs and a pair of S20-powered KPGC10 GT-Rs. His mind never stops coming up with new ideas and his latest creation is probably the most extreme he has come up with, a full dry-carbon S30 Fairlady Z. Now that is one car we will have to take a closer look at!

CONTACT: WWW.ROCKYAUTO.CO.JP

Although not as popular, there were a few SR20 conversions to be found



N/A straight sixes are the order of the day at Rocky at the moment, with the RB30 getting quite a workout



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Mugen engineers are more akin to race technicians, finetuning parts and cars to extract a little more **performance from every possible angle**

The towels were a steal at $36 AUD

HISTORY

Mugen was started up by Hirotoshi Honda, the son of Honda founder Soichiro Honda, and Masao Kimura in 1973. There is a common myth that Mugen is owned by Honda, but this has never been the case. Family ties have made things difficult, though, especially after the death of Hirotoshi's father in 1991, when he became the major shareholder in Honda Motor Company.

Hirotoshi-san started out by building his own racecar at his father's home before graduating from Nihon Uni in 1965, whereas Masao-san had previously worked for the Honda research-and-development arm and Honda Racing, himself a racing veteran with over 50 wins.

In 2003, however, Hirotoshi was involved in a tax scandal, which led to the creation of M-TEC, retaining the right to use the Mugen trademark. The company was restructured and is now run by Shin Nagaosa, a former manager of the engineering sector of the company.

Apart from selling onto the public, Mugen has also been heavily involved in Super GT racing, as well as Formula 3000, which led the company to F1 racing from 1992 until 2000. An NSX racing program is currently active focussing on circuits like Daytona and Sebring.

So, what's does Mugen mean? Well, it more or less translates to 'Unlimited', which is why people tack the 'Power' onto the end of it so often.

MUGEN

Among the shops we are looking at on this feature Mugen is without a doubt the odd one out. Being a part of Honda categorises this establishment as a tuning wing rather than a tuning shop.

Catering to the customer that is looking for a little more from his Honda, Mugen has to develop its cars and products in accordance to stringent regulations and homologations. For this reason, you will never see Mugen come up with turbo or supercharger kits, or anything of such an extreme nature.

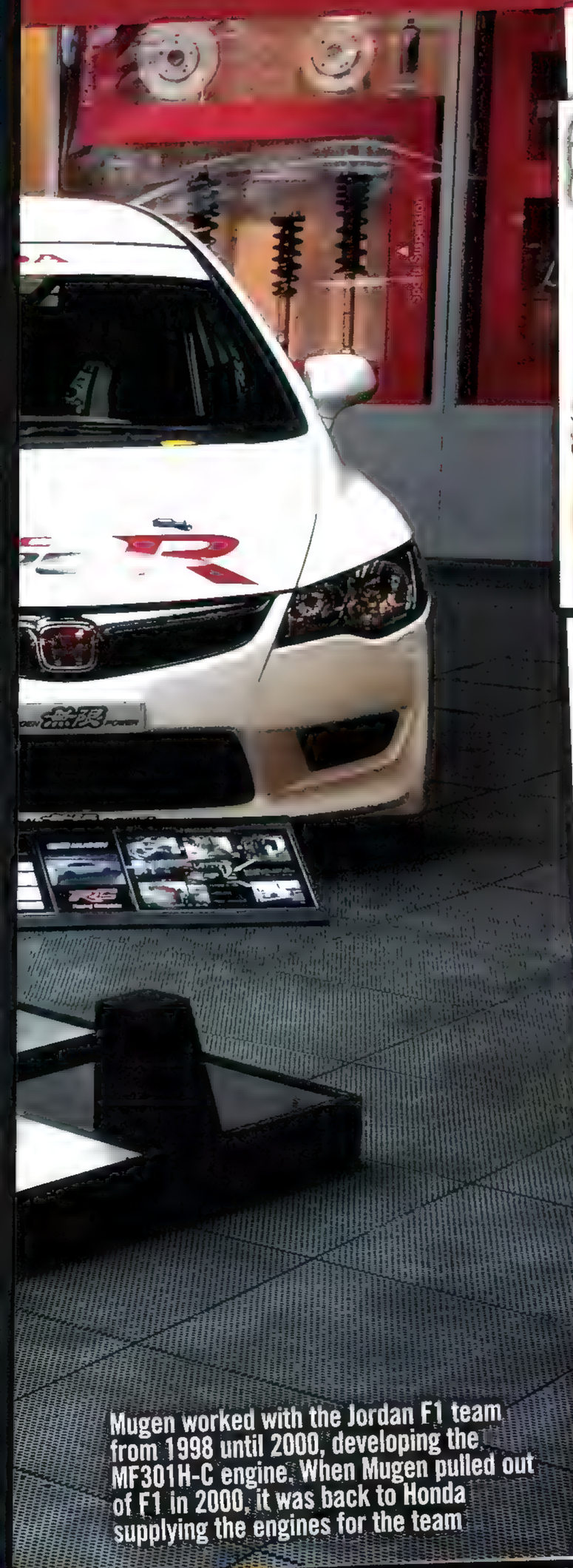
Mugen engineers are more akin to race technicians, finetuning parts and cars to extract a little more performance from every possible angle. Careful planning is taken to guarantee that each part will function and be as durable as its OEM counterpart and of course give a performance advantage.

On top of offering a long list of soft-tuning options for pretty much every Honda model on sale, Mugen at times shocks us all and takes things into its own hands by creating limited editions of the sportier versions Honda creates. The Mugen Civic Type-RR is probably the best example here, a car that was sold in a short production run back in 2007.

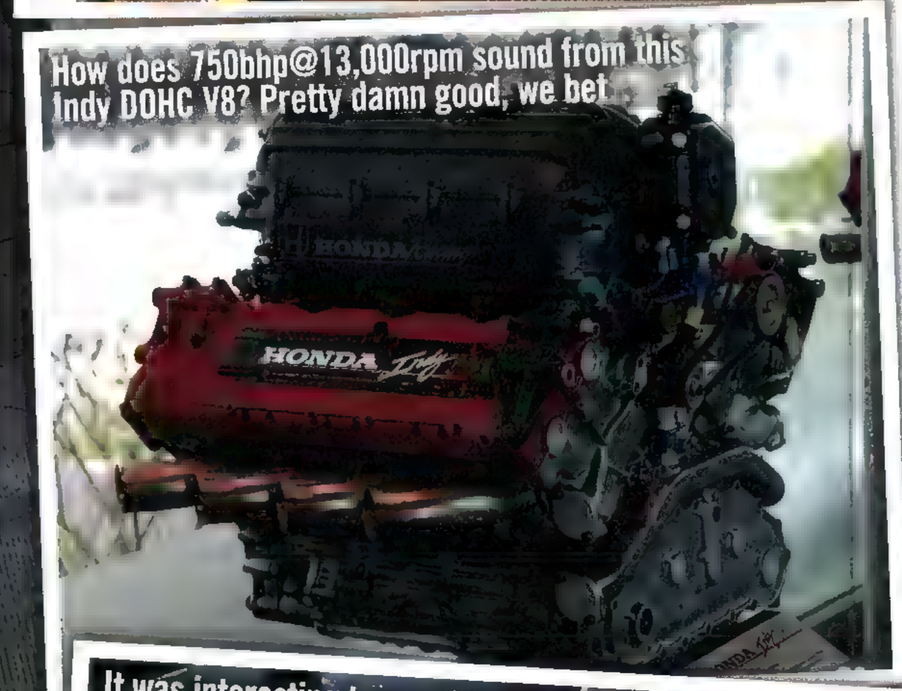
As it has shown us at motor shows and at Tokyo Auto Salons, Mugen knows a thing or two about teasing us all with crazy concepts, the most extreme one of all being the NSX-RR wide-body beast from 2009 that is still very much in the mind of every Honda enthusiast around the world.

At their HQ, just a stone's throw away from the old Honda F1 facility in Wako, Mugen has a small showroom where some of their past creations are displayed along with a selection of their tuning parts and a mouth-watering line-up of old race engines.

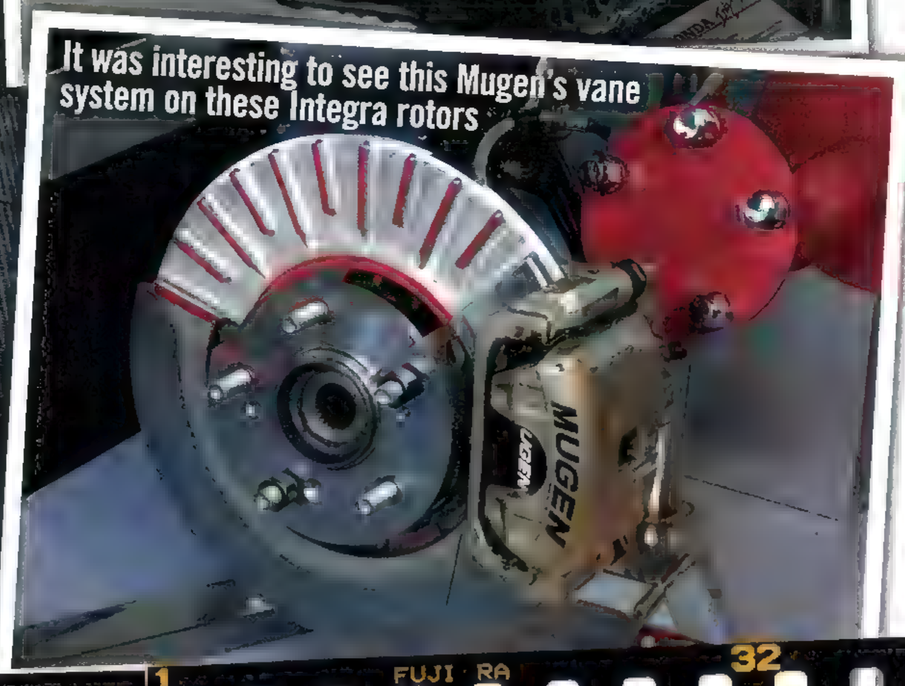
CONTACT: WWW.MUGEN-POWER.COM



A lot of people forget that Mugen has its finger in many pies, including bikes

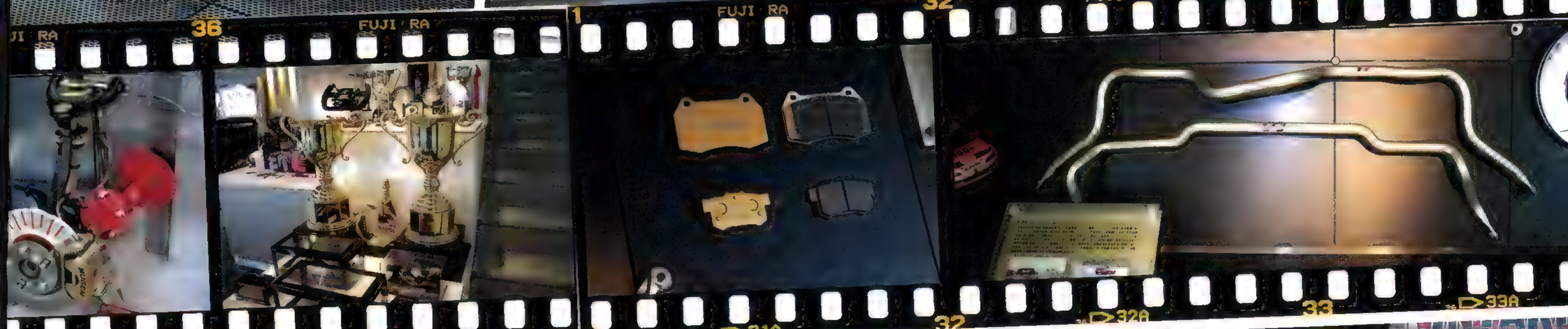


How does 750bhp@13,000rpm sound from this Indy DOHC V8? Pretty damn good, we bet

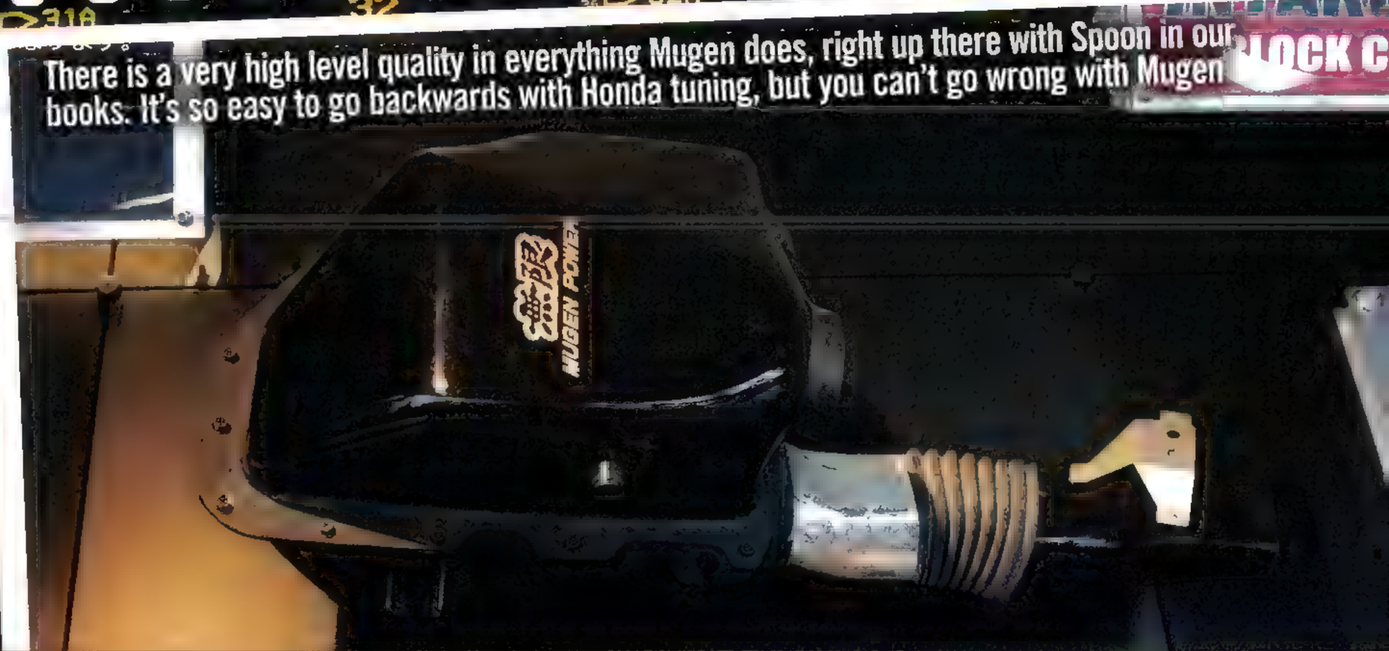


It was interesting to see this Mugen's vane system on these Integra rotors

Mugen worked with the Jordan F1 team from 1998 until 2000, developing the MF301H-C engine. When Mugen pulled out of F1 in 2000, it was back to Honda supplying the engines for the team



There is a very high level quality in everything Mugen does, right up there with Spoon in our books. It's so easy to go backwards with Honda tuning, but you can't go wrong with Mugen



FUJI RA 32

FUJI RA 33

FUJI RA 34

RA-680 35

That kid's cap on the right was around $50 AUD, so not totally ludicrous in the scheme of things

The forged seven-spokes on the right there were retailing for almost bang on $1000 AUD per 18in rim

The Mugen RR Advanced puts out around 260hp thanks to it tuned 2.2L K20A and weighs just 1095kg to boot given it's literally all carbon-fibre. This is 20hp up on the RR and it'll rev past 9000rpm, too. It clocked a very quick 1:04.90 at Tsukuba in 2008, 2sec faster than the regular RR

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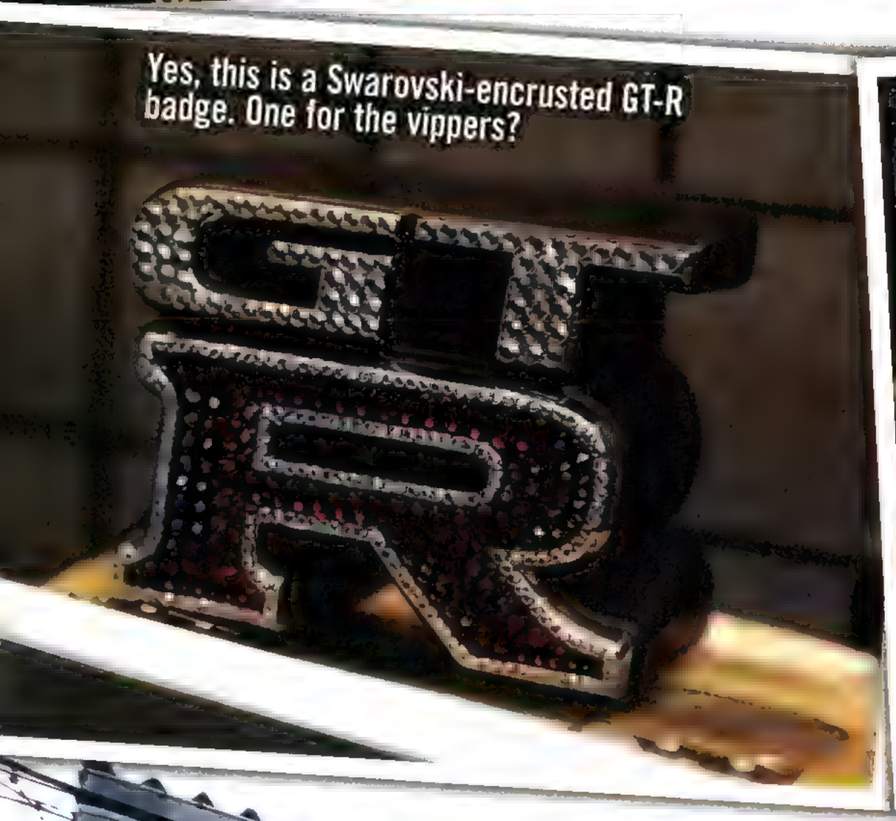
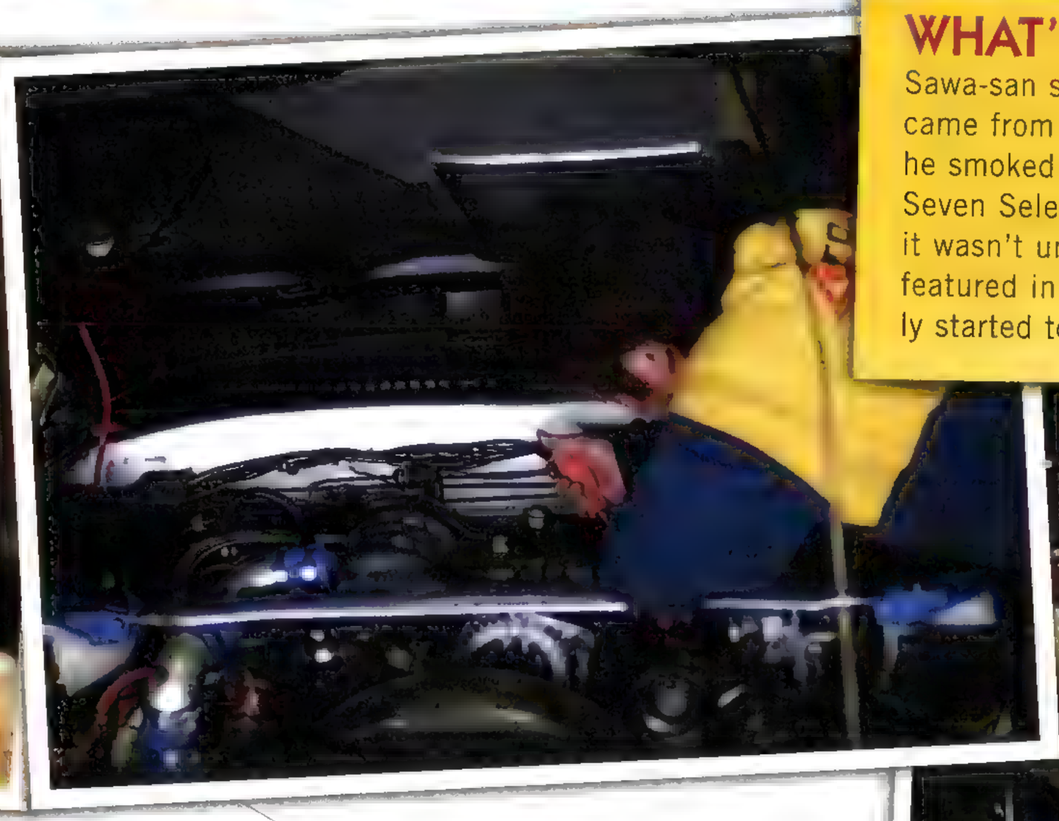
Yes, this is a Swarovski-encrusted GT-R badge. One for the vippers?





WHAT'S IN A NAME?

Sawa-san says the name 'Auto Select' actually came from a now defunct brand of cigarettes he smoked back in the 1980s, notably Mild Seven Select. Business grew from there, but it wasn't until 1985, when Auto Select was featured in CarBoy Magazine, that things really started to go crazy for AS.

The Boss vending machine is a given, but you don't see Chryslers out the front of too many J workshops...

Although famous mostly for tuning Skylines and RX-7s, Sawa-san's highest power output was from a Supra, at over 1000hp

Eiichiro Sawa believes aero is the last thing that should be done to a car, with safety a strong priority first, ie. handling and braking, before even looking at power

The world-renowned Auto-Select strut brace is made from T6 aluminium and wraps around the whole strut for maximum rigidity

With all this crazy machinery, it's interesting that Sawa-san has never been booked by police, maintaining a gold licence

Auto-Select also have some local pooches around the place, some of which oft find themselves in the driver's seat

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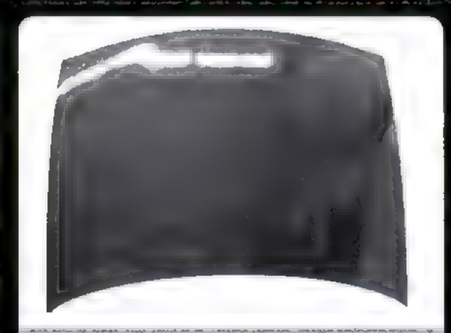
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The workshop itself, located in Saitama, is very small. Only a few cars can really fit inside

PANSPEED

Nestled deep in the industrial town of Hasuda in Saitama, Panspeed is renowned for creating some of the fastest RX-7s in Japan. The expertise they have gained in pushing the boundaries of tuning in the time-attack scene has allowed them to offer some of the best packages for customers wanting to get the best out of their rotary-powered machinery.

Their main focus, as president Komoriya-san explains, has always been balance, creating cars that offer the best in all departments. Their shop is constantly teeming with customer cars in to get a service, a few upgrades or a power check on their dynamometer. Komoriya-san was kind enough to let us wander around and check out the workshop in detail, especially the engine build room where the finely balanced Panspeed rotaries are put together.

We are walked through the various steps in the engine building process, which, compared to a regular piston engine, are quite simple. But on top of making sure the apex and side seal tolerances are within limits, it's the porting that gives a rotary its character.

Expanding, smoothing or adding extra openings to the ports allows the 13B to develop more power and make the best out of increased boost levels. The race engine in their time-attack FD3S has been peripherally ported, which is the most extreme form of engine breathing enhancements that can be carried out. It's not exactly for street, but some of their most die-hard customers actually request this!

Panspeed is probably the only rotary shop that hasn't shied away from modifying the RX-8, and by this we mean by completely rebuilding and developing the Renesis engine. Their demo car runs an impressive 300hp without any form of force-feeding and has been converted into a true race car. It's shops like Panspeed that stand out in the competitive tuning world for offering such a high level of expertise and customer satisfaction. «

CONTACT: WWW.PANSPEED.JP

There is no shortage of spares around the workshop, from apex seals to pistons and everything in-between

The Panspeed RX-7 was a fierce competitor at the World Time Attack Challenge. Here it was sans stickers a few months before the event

Using Australian GCG twin turbos for response, look out for a feature on this Panspeed demo car soon

Rebuilds head into the $7000 AUD-plus range, but you are buying from the best in the biz

Given Panspeed's reputation, everything is made to exact tolerances for maximum reliability

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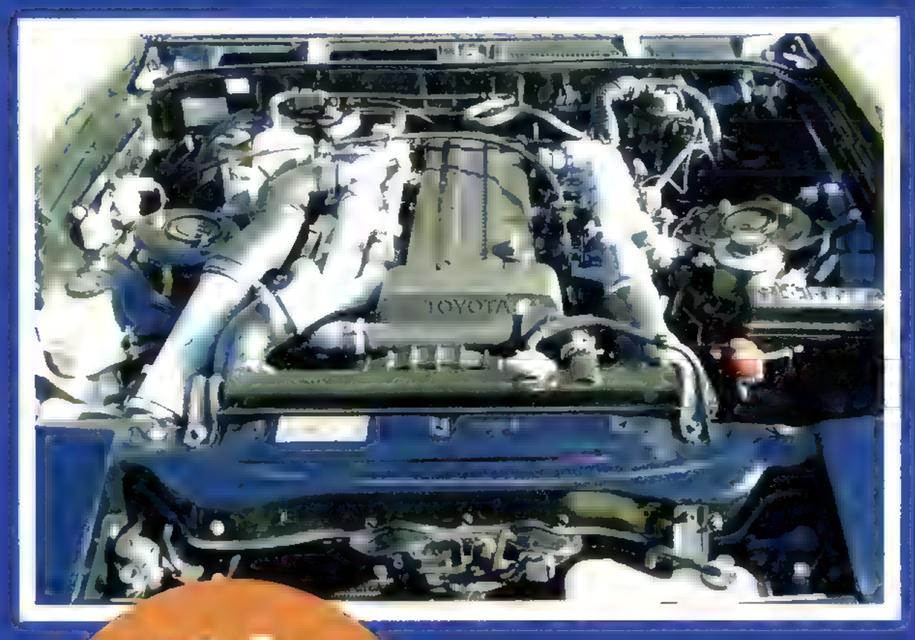

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Practically a Stinger missile with a couple of seats strapped to it, Adam's 527awhp R32 is ready to shock and awe

Lethal Weapon

BNR32

Adam's not had a single problem with the engine itself for well over

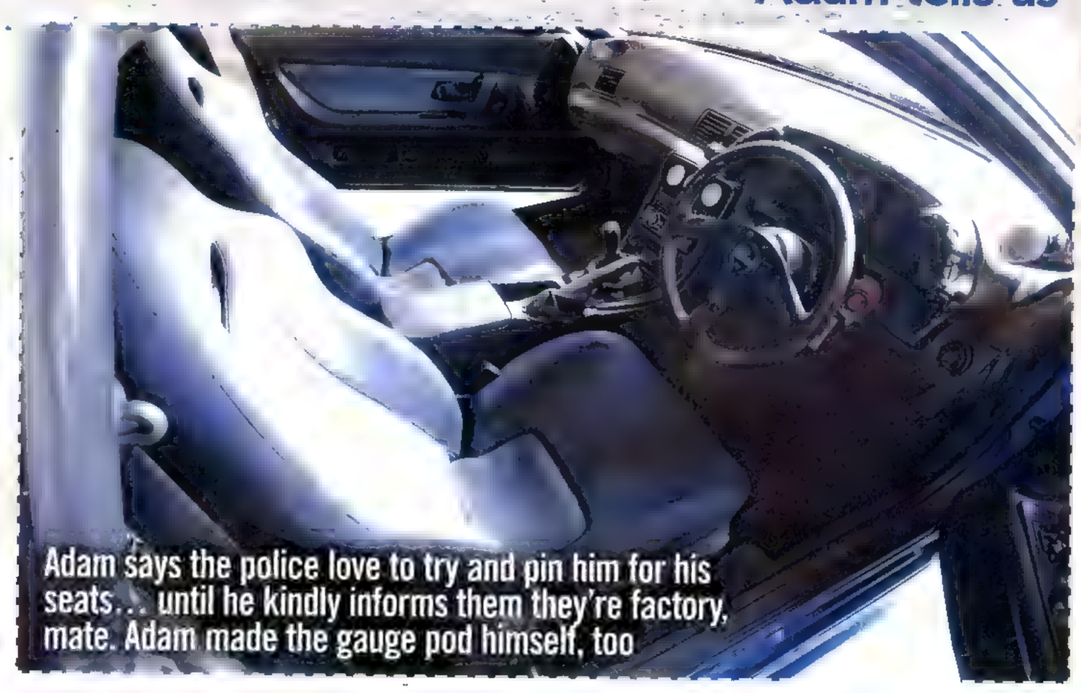
37,000km

We guess Dad's reputation lives on...

QLD WPN26

The engine bay is always a crowd-stopper, with top-notch fabrication to be found in every corner

"It's a big pussycat on the street," Adam tells us



Adam says the police love to try and pin him for his seats... until he kindly informs them they're factory, mate. Adam made the gauge pod himself, too

South-east QLD is home to many things – 'nanas, theme parks, the world's worst shirts – but it's also where you'll find a slew of GT-Rs ratcheted up to match anything you'd find from the Rising Sun. Leading the charge are people like 20-year-old metal fabricator Adam William Oberhardt and his old man; people who just won't stop until something is piece-for-piece perfect. And the outcome? You're looking at it.

"I've owned it a bit over two years," Adam told us of his R32. "It had a set of 17in wheels, Bilstein adjustable struts and was standard apart from a 3.5in exhaust and Mines remapped ECU. I was the first Australian owner and it was already this colour. I'm assuming it was sprayed in Japan."

Adam's always been a GT-R fan. For him, it's the "tough stance" that did it. "I love them to bits. AWD traction and big horsepower is an awesome combination," he says, but it's even more awesome when you involve some of QLD's best in the build...

Thanks to Mark at Godzilla, the GT-R is currently putting out 527awhp on 24psi and octane booster with the 4in exhaust. The engine itself is from an R33, with the work completed by 'Lackatraction' (otherwise known as Dad).

Yes, Adam's dad has been building motors since he was 14 and currently works on the big diesel jobbies. We're talking about earthmovers with $60,000 engines here. If one of 'em stuffs up, it's literally your arse on the line, which is why not a single motor Adam's dad has built has failed, including the RB26 you're gawking at. He built a 560hp Chev small-block back in the day, so a 2.6L like this was, well, a piece o' power pie.

What wasn't was getting the machining bang on and up to his standards. The first 'strengthened' crank returned with a bend in it, and although we're only talking about five- and six-thou' discrepancies here, it just wouldn't do. Dad even dummy assembled the engine numerous times before actually putting it together. That, my friends, is dedication.

Says Adam, "The first crank was destroyed from premature grinding, a bad tunnel bore. Local machine shops, fail. Thanks to to the Jack brothers and Crankshaft Engineering for fixing the problems," going on to state that, "Dad is very, very picky".

Messing about with the machine work probably cost Adam a good few thousand grand to get everything right, but in the end he says it's been well worth it, especially considering the car's never had a low-boost tune and often finds itself at full throttle.

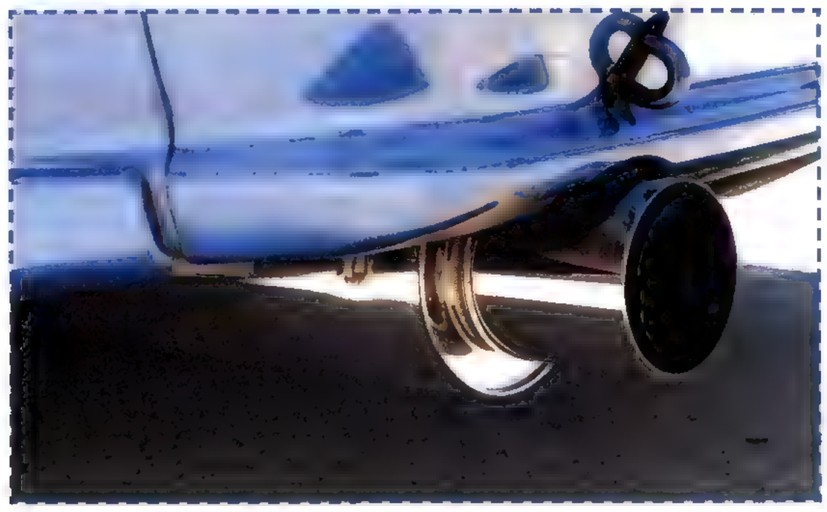
That said, Adam's known as something of an 'easy driver', though that hasn't stopped the police having a peek-a-boo every so often.

Adam says their eyes light up when they lift the hood, but alas, there are no issues to be found. They'll go after the seats... only to be told they're standard, finger the guards and so

The actual colour used here is unknown, which has made colour-matching a little difficult. Some kind of Bayside Blue bastard child, perhaps?

GODZILLA DID-YOU-KNOW

- First showed up in the 1954 film Gojira, directed by Ishiro Honda
- **The name 'Gojira' is actually a mix of 'gorira' (gorilla) and 'kujira' (whale)**
- He's got a star on the Hollywood Walk of Fame
- **He's only one of two fictional characters to ever win an MTV Lifetime Achievement Award**
- His most notable attribute is his patent 'atomic breath', a thermonuclear ray of heat emanating from his mouth (a trait shared by our ed – all)
- **In earlier films, Godzilla had a son, Minya, who blew radio-active smoke rings (Yes)**
- Godzilla is depicted as being almost 200ft tall in the original movies, but the actual models used for special effects were just 7ft tall



on, but the car sits nicely at legal height, with the exhaust tucked up complexly out of defect's way. And that's how Adam likes it – untouchable.

Indeed, this is exactly what the GT-R is to most contenders, especially when you consider its 527awhp. However, "It's a big pussycat on the street," Adam tells us of cruising around, but come 4500–5000rpm and it's 24psi worth of WOT hang-on-for-lifeage.

Says Adam, "The car was built just to look good, go fast and make decent power. It was meant just for a daily with intentions of going to the drags every now and then. Having a VL Calais making 400rwhp since I first got my licence, a standard GT-R was a bit boring."

But as we all know, any Godzilla built to be serious fast turns into a monster exercise and usually one fraught with woe. In Adam's case, it's been gearboxes.

Third was annihilated in the first box pretty quickly. The second had issues when it was bought, with various ugly stuff dropping out from the sump when the boys pulled it free, but so far the current box is holding up well enough until Adam can work his way up to dog-engagement.

But the build has always been about simplicity. Take the fuel pump, for example. As Adam points out, most big-HP GT-R builds use two 044s, but only one's really necessary. The key, he says, is to run decent-sized lines so that the supply doesn't choke up, and he's not had a single problem with the pumps, nor engine itself, for well over 37,000km now. We guess Dad's reputation lives on...

On that note, Adam would like to say a big thankyou to the old man for building the engine and all the help and support, Mum for putting up with the endless project discussions and late cold nights spent at the shed, his lovely girlfriend Sarah for always being there and the odd hand to keep it clean, Jack Bros Engineering and Crankshaft Engineering for their precision machining and Mark at Godzilla for the tough tune.

The next stage will see the car head back to Godzilla for bigger injectors, an E85 tune, extra pump and hopefully a very serious dyno printout in Adam's backpocket.

"The best thing is that it's an all-rounder," Adam goes on. "It's got nice paint, is low with a tough stance and 10s all 'round. Plus the engine bay is always a winner."

The only thing he says he might have done differently would be saving up and stroking it. Considering this exercise has been $40,000 in total, that might have well skewed things into the 'I receive Xmas cards from my bank manager' category, but regardless, Adam is well happy with the current state of things. He's got a GT-R that turns tyres like butter and is more or less a mobile middle finger to local dinosaurs. What's not to like? «

VITALS

ENGINE: 2.6L RB26DETT six-cylinder turbo
POWER: 550rwhp
POWER FROM FACTORY: 280hp
POWER TO WEIGHT: 0.28kW/kg

» ENGINE HARDWARE

Block decked, honed, bored, tunnelled and chemically cleaned, Eagle conrods, R33 RB26 crank nitrided, shot-peened and fully prepared, forged CP pistons and rings, King bearings, ARP main studs, mild head port, polish and three-angle valve grind, 280° Camtech camshafts, double valve-springs, ARP head studs, Cometic head gaskets, GReddy baffle kit and oil pump, custom catch can, HKS purple covers, polished turbo, strut brace, intercooler, piping and intake, Tomei oil-restrictor kit, BMC air filter, TiAL 50mm blow-off valve, Garrett T04Z turbocharger, custom tuned-length thick-wall manifold, 48mm Turbosmart external wastegate, HKS intercooler with hard-pipe kit, 4in dump pipe and mild-steel mandrel-bent exhaust system, Metal Cat, custom 4in /5in out muffler, custom stainless steel 2.8L external surge tank with Bosch 044 external fuel pump, 0.5in stainless fuel line, 870cc Sard injectors, billet fuel rail, PFI fuel-pressure regulator, N1 water pump, custom oil cooler with braided lines, 50mm copper-tank radiator, SplitFire coils, Haltech e11v2 EMS, Turbosmart eBoost Street

» DRIVETRAIN

Standard five-speed, Nismo lightweight flywheel, twin-plate Nismo brass-button clutch

» BRAKES/SUSPENSION

R33 V-Spec Brembo calipers and rotors front and rear, EBC Greenstuff brake pads, braided brake lines, Bilstein adjustable coil-overs, Nismo strut brace, front and rear adjustable camber arms

» WHEELS/TYRES

19x10in Lenso wheels, 275/35 Kumho Ecsta KU31 tyres

» BODYWORK

Custom blue respray, grille removed, carbon-fibre bonnet lip

» INTERIOR

Nismo gearknob and steering wheel, Alpine stereo, Auto Meter boost gauge, Stewart Warner oil temperature, oil pressure and water temperature gauges in custom in-dash mount, C's short-shifter

When we asked Adam what his ultimate ride would be, he replied, "That would have to be a big-horsepower R34 GT-R"

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SHANNONS

A new season with new names and new cars, welcome to the 2009/10 WA Drift Championships

New Order

Words and pics Rick Morton

A new season is all it takes to inject some enthusiasm into any sport, and the 2009/10 Japanese Wholesale Spares presented by Autotrader Magazine WA Drift Championship is no exception.

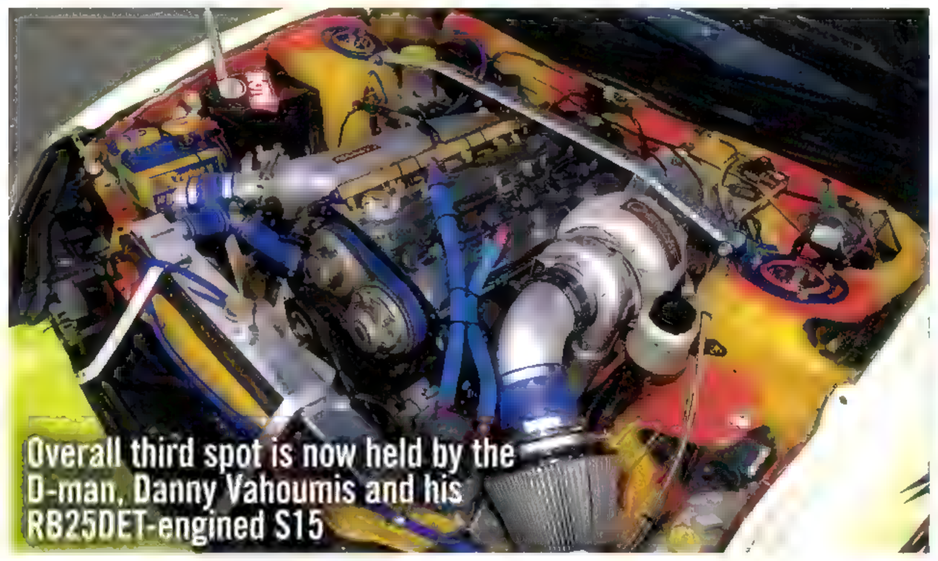
The first three (six rounds total) of the new series were conducted at Barbagallo Raceway by the WA Sporting Car Club between October and December late last year, with new names, new cars and the usual suspects all adding plenty of interest.

There's little doubt, though, that the new Japanese Wholesale Spares B4 Subaru Liberty with a Nissan SR20DET engine and drivetrain (issue 120) has been a huge talking point. Driven by Adam 'Borneo' Trewhella, the B4 has, however, missed one round, which sees Trewhella sitting in outright sixth at this the halfway point.

Leading the points table is Nicholas 'Banger' Van Geest in his Japanese Wholesale Spares four-door R34 Nissan Skyline. Two round wins and a 3rd have made 'Banger' the hot favourite for the title this season, yet Travis Picket in his supercharged HSV ute and Danny 'The Godfather' Vahoumis in his fluoro Japanese Performance Centre RB25DET-engined Nissan S15 have proven themselves to be the danger men.

Vahoumis has top qualified at two of the three rounds thus far and sits comfortably in outright third. Like the JWS B4 Liberty, Vahoumis's car is a pearler and also featured back in issue 123.

Tarquin Van Rooyen made it through to the A division final at the December round, but was defeated by the Banger man



Overall third spot is now held by the D-man, Danny Vahoumis and his RB25DET-engined S15

Ryan Tweedle knows all about consistency and holds outright 8th spot at the halfway point

In a world dominated by Nissans, it's great to see something like this old-school MZ20 Toyota Soarer in the mix. John Richardson is getting better with each round too, making it into the elite A Division at the December round 3 of the series. The car has a 1JZ-GTE conversion and plenty of tuning and suspension development work courtesy of WTF Auto – who also tuned the car's A'PEXi Power FC computer. There's about 320rwhp on tap at the present

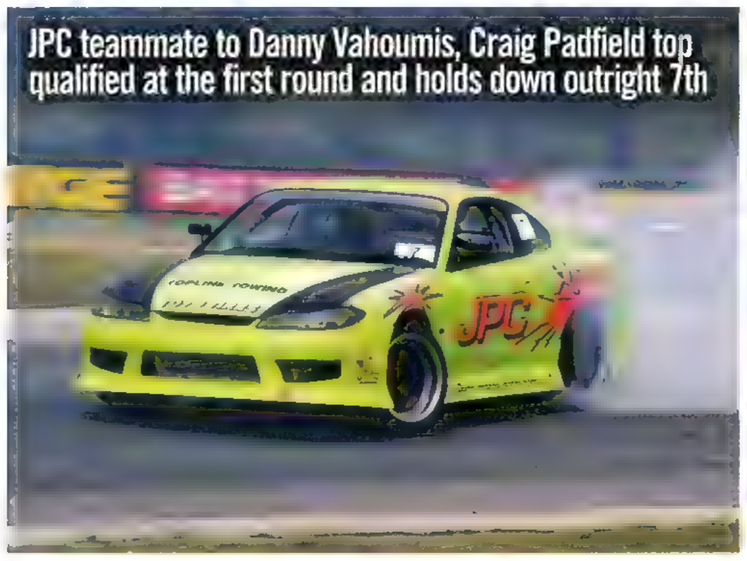
Sam Teanby proved last season that he has the ability to go places in the sport of drift, but mechanical problems have kept him out of the running thus far this season

Unfortuantely, tyre sponsorship problems have kept Carla Fry out of the competition this season, although long term supporter, Kensei Garage, pulled out all the stops to get Carla to the December round where she finished outright 3rd for the day. Clearly, tyre companies don't like the idea of a girl who can actually drive and keep her clothes on promoting their products

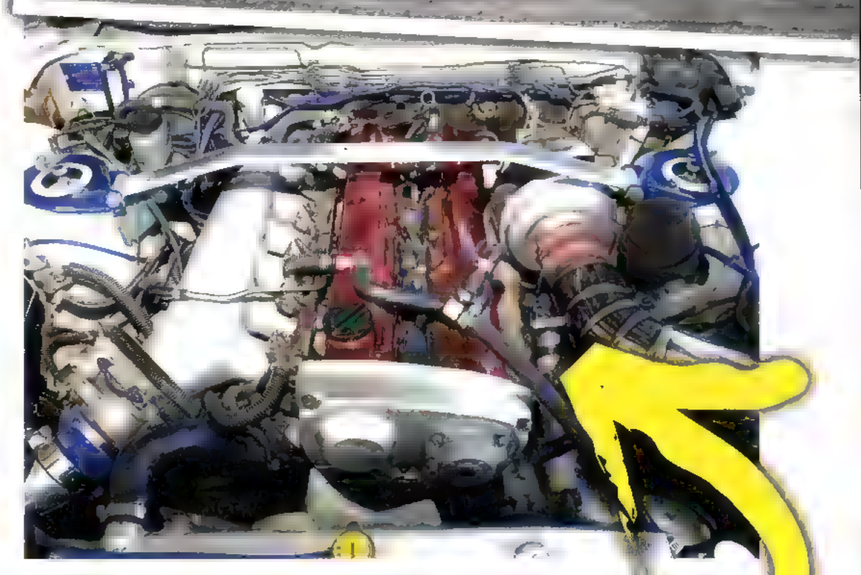
Two round wins and a 3rd have made 'Banger' the hot favourite for **the title this season**

Joe Waghorn (front) trying to keep Danny Vahoumis hone

JPC teammate to Danny Vahoumis, Craig Padfield top qualified at the first round and holds down outright 7th



Cezar earnt enough points in the first three rounds to sit outright fourth with his NEO '25-equipped R32



After allowing a certain Luke Fink to thrash his R33 at Powercruise in Perth, Luke Streat decided to race his Japanese-built RB27DET engined weapon at the December drift round. Luke qualified in the B division and won his first race before being knocked out. The car's RB27-based engine breathes via an A'PEXi RX6 turbo and has the usual bolt-ons plus HKS Step 3 cams and an HKS ECU

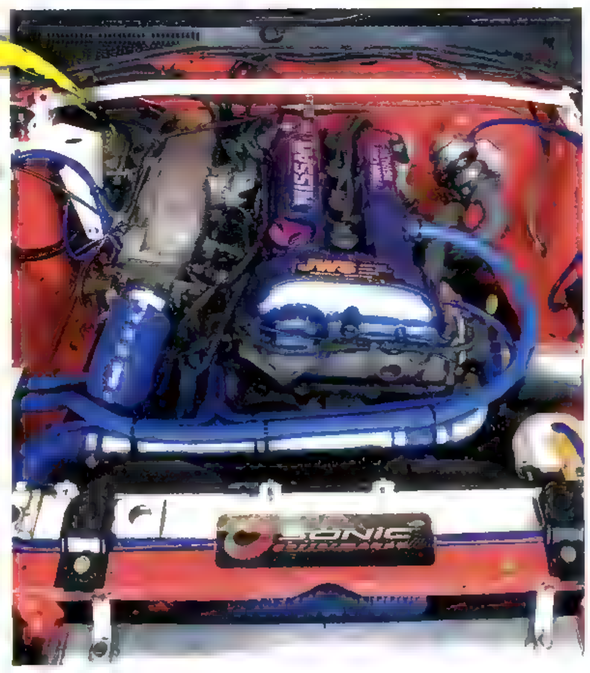
In many ways, though, drifting in Western Australia is going through a period of change, as several new drivers make their presence felt.

Cezar Hanter in an R32 is now sponsored by Kensei Garage and sits in overall fourth at the halfway point of the Championship, while Terrance Ingham, driving a 1986-model Series IV RX-7 tweaked by Factory RE, holds down outright fifth spot.

Along with Ryan Tweedle, Sam Teanby, Carla Fry, Joe Waghorn and Craig Padfield, these are the names that will undoubtedly be amongst the key top 10 players as the season closes out in 2010. For now, though, let's get into the pixilated action from the WA season so far. «

Some folks say you cannot drift rotaries, but Terrance Ingham holds overall 5th after three rounds with his 1986 model Series IV RX7. The built 13B engine uses extend porting, is studded and force fed by a GT35 turbo

Nicholas Van Geest is hot favourite for the 2009/10 WA title



No comment needed really for the JWS Subaru B4 Liberty with SR20DET engine and drivetrain. Driven by Adam Trewhella, the car has missed one of three rounds, but Trewhella still holds overall 6th

LEADERBOARD

2009/10 Japanese Wholesale Spares presented by Autotrader Magazine WA Drift Championship

TOP 10 AFTER 3 OF 6 ROUNDS

POS	NAME	RD1	RD2	RD3	TOTAL	
1.	Nicholas Van Geest	20	23	23	66	(Japanese Wholesale Spares R34)
2.	Travis Pickett	23	18	10	51	(Port Kennedy Tyre & Brake HSV Maloo ute)
3.	Danny Vahoumis	14	22(TQ)	13(TQ)	49	(Japanese Performance Centre S15)
4.	Geza Hantai	15	16	14	45	(Kense Garage R32)
5.	Terrance Ingham	13	13	8	34	(West Coast Wheels Factory RE Series IV RX-7)
6.	Adam Trewhella	18	14	-	32	(Japanese Wholesale Spares B4 Subaru Liberty)
7.	Craig Padfield	13(TQ)	5	12	30	(Japanese Performance Centre S15)
8.	Ryan Tweddle	4	8	16	28	(R32)
9.	Joe Waghorn	9	15	-	24	(Carine Cycles S15)
10.	James Eames	8	15	-	23	(RB26DET Nissan Laurel)

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LAP TIME: 1:17.5

Quantum Leaps in lap speed from careful set-up and tuning

Babyzilla

Words: Martin Donnon Pics: Martin Donnon and Chris Harvey

PART IV

Out of the ashes of our last instalment rises the phoenix that is the Willall Racing Evo X. The R35 GT-R set are in real trouble...

The disappointment of our last outing in the Evo was reflected in a general silence in the normal workshop chatter about the car. Normally brimming with confidence, it was all a little quiet on the Evo front as we counted down the days to the first time-attack in 2010. There was no way in the world I was going to go down quietly, though, so instead I devoted my spare time to sharpening the Evo scalpel a little further.

Will... Ph (08) 8341 0400

Mainline DynoLog Dyno Report

Mitsubishi EVO X WILLALL e85 8/3601
EVO X MR Baseline 1/3359
Mitsubishi EVO X WILLALL 5/3252

dTorque Total (N.M)

EVO X Tuned E85 Fuel
Stock EVO X SST
EVO X Tuned Cat Back Exhaust

900 800 700 600 500 400 300 200 100 0

40 2500 | 50 3120 | 60 3750 | 70 4370 | 80 5000 | 90 5620 | 100 6250 | 110 6870

Speed (KPH) / Engine Speed [Derived] @ Dif Test Rates

DynoLog # 241150-V4.026, Config: Ls1t_sa.Cfg, Calib: Ls1t_sa.Cfg

© DynoLog Dynamometer Pty Ltd 1994-2010

A transmission temperature gauge was another addition to the Evo, but one more for data gathering than for any kind of performance benefit

GRUNT HUNT

It doesn't matter how you want to slice it, compared with most track-style offerings the Evo X is pretty slow in a straight line, or at least it is compared to the cars I normally slip my rear end into at the track. We needed to find some power, and we needed to do so with the least amount of fuss and modification, but most importantly we needed the power without destroying the elastic Evo low-RPM response.

With big, laggy turbos out of the question due to increased lag it was time to look at the possibility of E85. As a simple power-adder with the supporting fuel system in place, it was a given that we would swap to this far more power-productive pump fuel. Compounding this decision was the local E85 fuel pump that had 'corn gas' at 99c per litre. Already having a surge tank in place with an external Walbro pump, the only upgrade we required was a set of 800cc straight-fit injectors and some tuning.

As expected, once we had set the engine management tune up properly for E85, the power and torque started to flow, and I mean really flow, with a net result giving the Evo an extra 30kW at the wheels through the midrange through to the top, and a whole bunch of torque (100Nm) at 4000rpm.

As you could imagine, the response of the engine was now explosive off the corner with nothing lost at all, only gains to be had everywhere. The smile was starting to return to my face just a little at this point in time.

The new 800cc injector gives us some more scope for power even on E85, with up to another 50kW ATW able to be supported... which gives some interesting possibilities for further development

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CHASSIS

As mentioned last instalment, I tend to spend a lot of time looking at the way the car handles on the track via still photography. While in-car camera is a great pub-talk tool, and external video is a great indicator of speed, nothing tells the story like high-speed still photography.

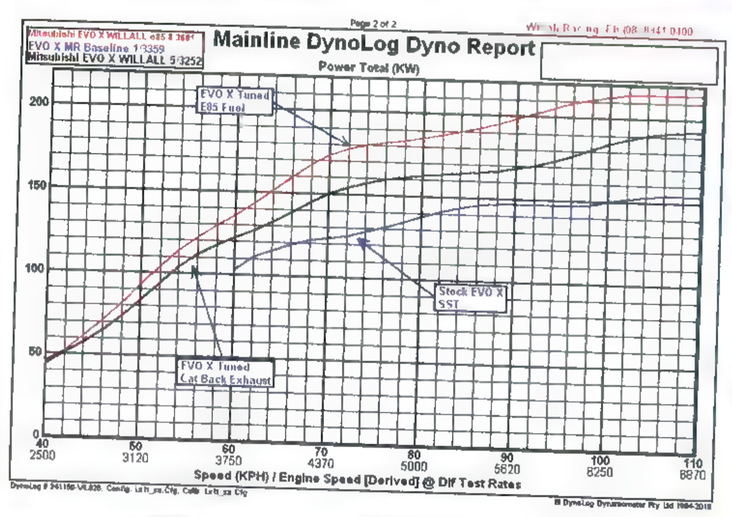
For this task I use a little known guy by the name of Chris Harvey (www.brassmunkymedia.com.au), who is a budding shooter with all the right gear and a knack for getting stuff sharp, which is just what I need.

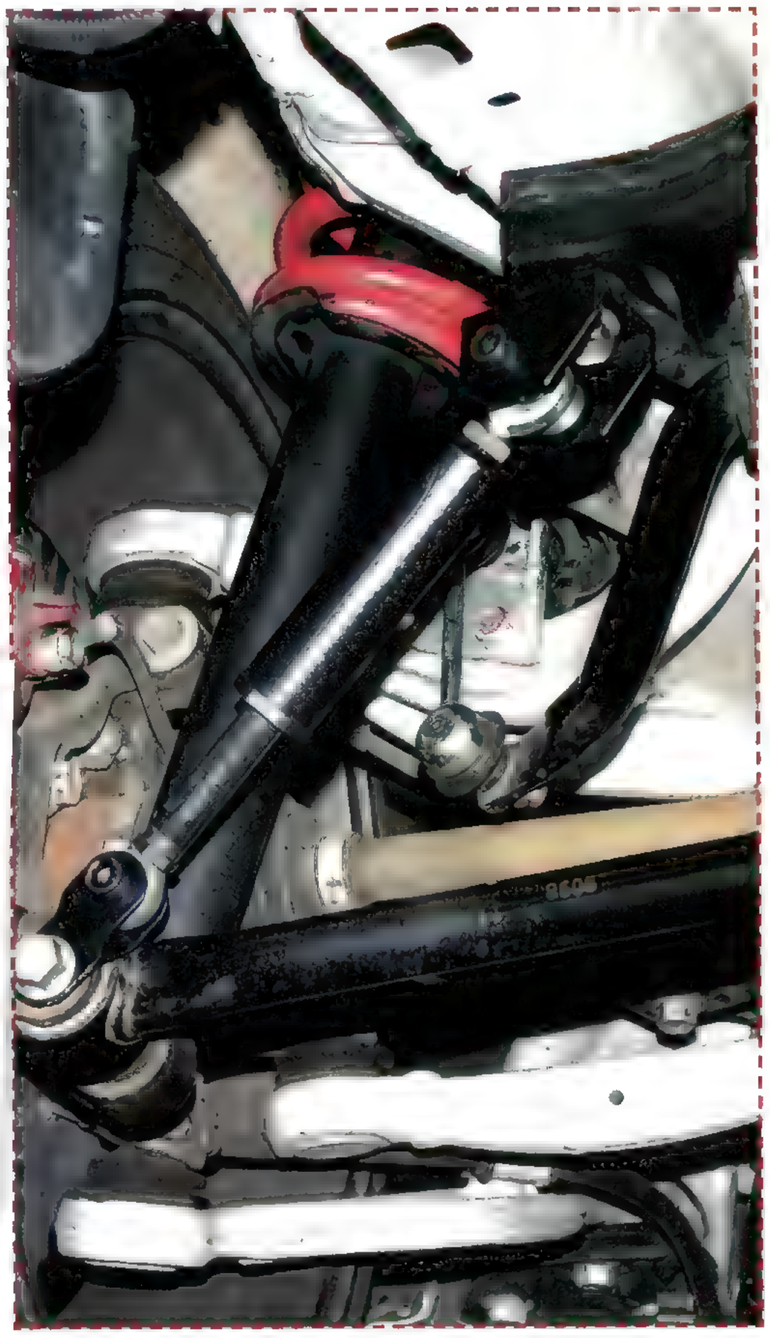
Last time we used this photography to analyse the results of our camber modifications to the front end of the car, and they worked nicely. What did show up from there was a distinct lack of rear camber, causing the tyre to roll, which is exactly what we didn't want. It was time then to have a look at the rear wheel alignment and see what other advantages we could gain from the Evo rear suspension.

Utilising the skills of a good mate of mine (it's true, I do have some), we had a look at the Evo sitting on the hoist, and the answer to him (not me) was instant and clear. "Mate, this thing has way too much droop," he commented. "It's never going to handle properly like that!" And with that I had a closer look and did indeed notice that those rear wheels were hanging down around some 50cm from the inner wheel arch (a long way).

Now, the theory goes something like this: To make the front end of the car turn better and reduce understeer, the requirement is to unload the rear end and have the car turn around the nose. The whole principle is to reduce rear grip in an attempt to increase front grip. It doesn't sound very pretty, but the beauty of the Evo and its advanced all-wheel-drive system is that with one wheel effectively lifted off the track surface you still have three wheels driving the car forward.

Reducing the amount of droop in the rear end of the vehicle will effectively lift the inside rear





Our unique droop restrictor design for the rear end of the Evo X. It works effectively and is a big laptime improver

wheel under hard cornering and transfer load back onto the front wheels more evenly.

Think about it for a moment and consider that with both rear wheels pushing evenly mid-corner the natural tendency of the chassis is going to be towards understeer, which is exactly what we are trying to avoid.

Having the nose turn without this 'push' will allow earlier throttle application out of the corner and get the rear wheel back on the ground sooner as the Evo gets on with the job of driving down the road at full power.

Normally this requirement for reduced droop is taken into account with aftermarket coil-over suspension that has much shorter travel built into the shock body. However, we didn't have the luxury of going this way having retained and modified the factory Evo GSR KYB shock absorbers and springs to get our handling in the ballpark. Some lateral thinking was going to be required here.

Traditional approaches to reducing droop have used solutions as agricultural as pieces of chain to stop the rear wheels hanging and even clamps around the shock-absorber body. None of this was going to cut it in my car, so instead we engineered some neat-looking adjustable low effort hydraulic rams (so they don't interfere with the shock absorber rate) to limit rear travel. Have a look at them in the picture to get an idea of how they work.

Bigger injectors for the Evo X are available off the shelf. We got these from AMS in the United States

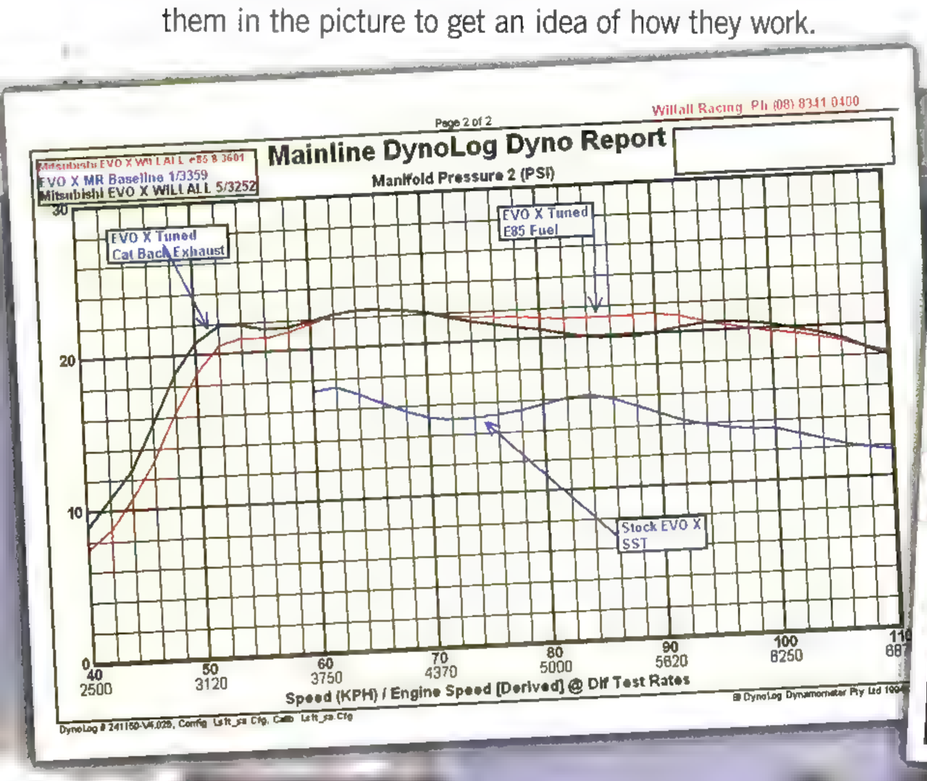
Maybe I hang out with too many Americans, but the temptation to modify the fuel flap sticker was too much to resist

PREP

With the droop restrictors made and installed in the car, we adjusted the allowable rear droop to just over 8cm, with this being my starting point for track testing. The rear wheel alignment was also changed when we installed the droop restrictors, giving the Evo negative 2.0° rear camber, to match the negative 3.5 on the front. Hopefully this would deliver the flat-sitting tyre we needed in high-speed cornering.

Another small trick we worked on was increasing the track of the car. With the wheels leaning in at the tops the Evo had an odd knock-kneed look, and according to my chassis guru there would be even more grip to be had by designing and making a bolt on 30mm spacer. With this done, some fresh Castrol SRF brake fluid and new Yokohama Advan A050R tyres, it was time to held out to the first time attack with zero testing under our belt.

The wonder drug of modern turbocharged engines is E85. Don't listen to the knockers. It's brilliant in all regards



Wheel spacers in bolt-on style provide an extra 30mm of track front and rear for the Evo and increased mid-corner grip

Once we had set the engine management tune up properly for E85, the power and torque started to flow, and i mean really flow

Although obscured by the car, you can see the inside edge of the front wheel and the outside edge of the loaded rear wheel, and they are sitting perfectly flat through the final turn at Mallala

AT THE TRACK

This was the best the Evo had ever felt, being quick straight out of the box and turning hard into the corner. Getting on the power earlier combined with the extra kilowatts from the E85 tune released another 1.4sec per lap as an improvement, which is far from small in the scheme of things. The good news is that I still think the car has some way to go in terms of mid-corner grip and total chassis balance.

We are still struggling with the tyres, having them go off and start to slide after a single fast lap, but Evo X ace Steve Glenney tells me it's more to do with my driving and set-up rather than anything to do with the tyre, which incidentally he rates right up there with the very best R-comp-style tyres.

It's back to the drawing board then in search of a fresher set-up and some more speed. Already the Evo is faster around our track than the majority of R35s... Let's try and shave that list down a little.

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HPI124_01_Rayethan

Winding Down

Words and pics: Jack Drewett

DIFFICULTY LEVEL: MEDIUM
TIME TAKEN: 3 HOURS
TOOLS REQUIRED
0.5in drive, 0.25in drive, 18mm socket, 14mm socket, 12mm socket, 10mm socket, breaker bar, extension bar, allen key set, rin spanners, phillips-head screwdriver, trolley jack, two axle stands, wheel brace, friend

Sometimes modifying an import feels like you're jumping through hoops and ticking boxes as you go. Exhaust? Check. Cooler? Check. ECU? Yep. You get the idea. For a path that's supposedly less travelled, the 'JDM trail' is starting to look a little like Main Street.

The fact that more people are waking up and deciding to sell their lifeless VQ Statesmen or dull XR8 Ute and toy with something from the Land of the Rising Sun isn't bad news either. A bustling market means parts have never been cheaper and the community has never been stronger.

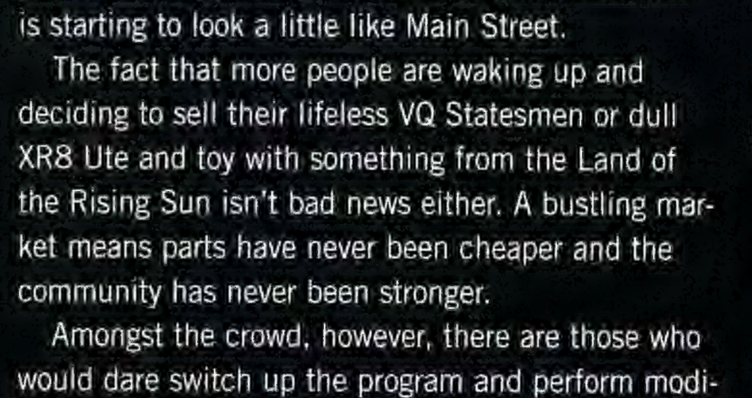
Amongst the crowd, however, there are those who would dare switch up the program and perform modifications in seemingly illogical orders: TD06 turbo kits teeming with factory engine management, Poncams dropping in before an intercooler has even been fitted and so on and forth.

Some would attribute these actions to an intelligence-related birth defect, while others would stamp these brave souls as trendsetters, mavericks of the flock who dare to do things no sooner than when they are damn well ready.

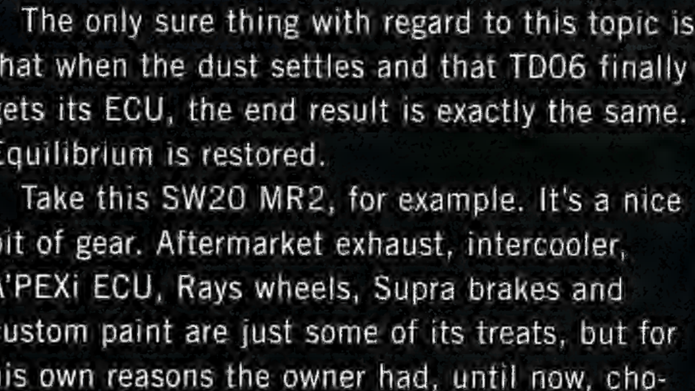
The only sure thing with regard to this topic is that when the dust settles and that TD06 finally gets its ECU, the end result is exactly the same. Equilibrium is restored.

Take this SW20 MR2, for example. It's a nice bit of gear. Aftermarket exhaust, intercooler, A'PEXi ECU, Rays wheels, Supra brakes and custom paint are just some of its treats, but for his own reasons the owner had, until now, chosen to run with factory shocks and springs.

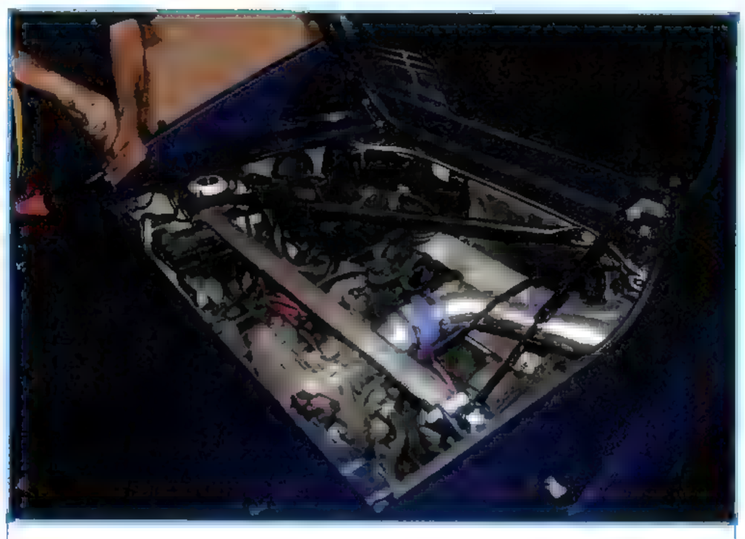
We're here to change this, and after reading this you'll be surprised by just how easily you can, too.



STEP 1
The car in question; not bad at all, but it could definitely do with some adjustable suspension.



STEP 2
...And the solution to the aforementioned problem: two-way adjustable Tein Flex.

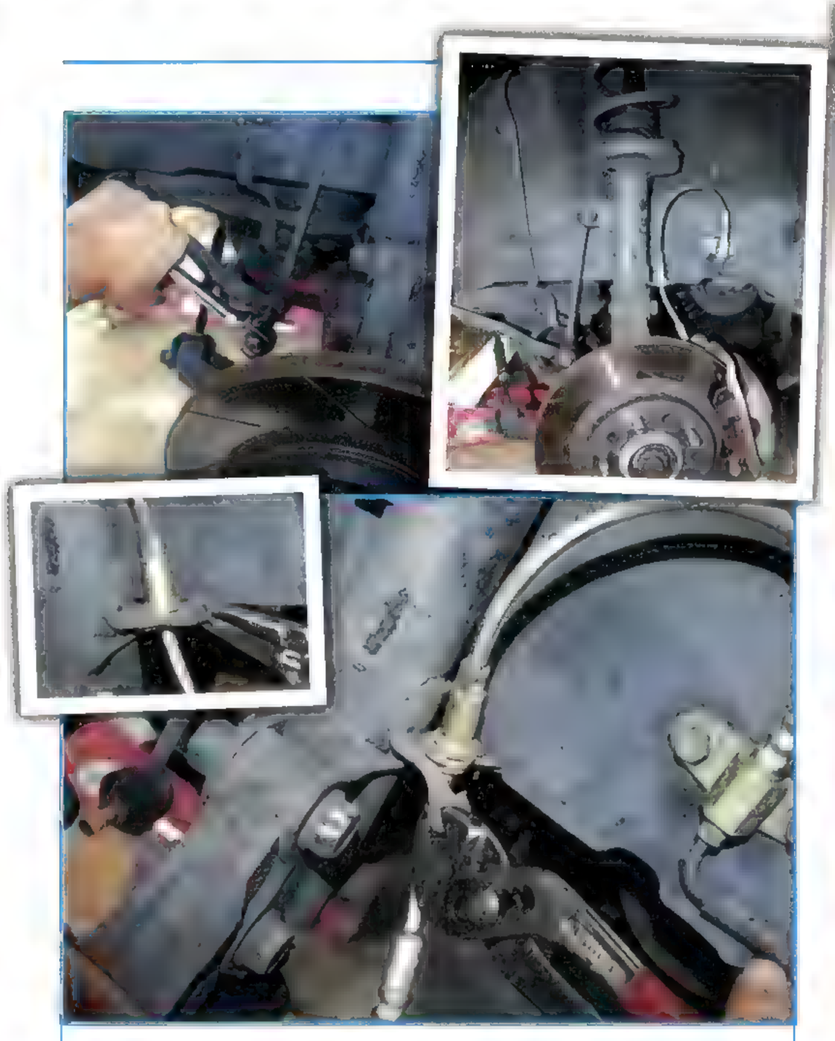


STEP 3
To access the tops of the rear struts, you need to remove both the engine hatch and the two plastic panels that flank it. A 0.25in drive with a 12mm socket and screwdriver should see you out of trouble.

STEP 4
Now break the seal on the rear wheel nuts.

STEP 5
Get the car up in the air. As you can see here, we've balanced the car on the usual jacking points under the sills, but being rear engine made this a little unstable.

STEP 6
We'd recommend placing the stands under the rear sub-frame instead.



STEP 7
With the rear wheels off, the factory struts are certainly no things of beauty.

STEP 8
The first thing that needs undoing is that swaybar. As these loosen they can begin to turn the thread, though thankfully a hex hole in the centre means that you can use a ring spanner and allen key to finish it off.

STEP 9
Next up is the brake line. The bracket that attaches these to the stock strut can be troublesome, so just grab a pair of pliers and bend it out of the way if required.

STEP 10
Crack and loosen the nuts that hold the strut in from the top.

STEP 11
Now it's time to release the actual strut from the hub. Support the hub with the trolley jack and use a breaker bar to crack the nuts as pictured.

STEP 12
Once the nuts are removed the bolts can be loosened and eventually punched out.

STEP 13
A little loosening later the strut will pop away from the hub.

STEP 14
From there, removal is simple.

STEP 15
Not wasting any time, grab the replacement coil-over (make sure it's the right corner!) and install it as per the reverse of what we just covered.

STEP 16
Suspending it from the nuts at the top of the strut tower makes working the hub back on easiest.

STEP 17
Reattach the swaybar using the allen key and ring spanner.

STEP 18
Once you've lined the hub up, knock the bolts back through so they mount the same way the factory ones did.

STEP 19
The last thing left to do is slot the brake line back in. Being a high-quality product means little things like this fit up very easily.

STEP 20
Measure where the coils stand so you can get each side even. We're not going to worry about lowering the car just yet, but we don't want to be sitting crooked like we were cruising Crenshaw with 'Cube.

STEP 21
After lounging around briefly and marvelling at how easy PI just made it to install those rear coil-overs, jack the front up and get the wheels off.

STEP 22
The crossmember makes a good mounting point for the stands.

STEP 23
When cracking the big nuts on the driver's side you'll need to be lifting upwards with some serious force. This can be dangerous to the paint on the guards. Wrapping the breaker bar in a protective household towel is cheap insurance.

STEP 24
A 10mm socket makes light work of this line. Note that the pins that hold the strut to the hub have been left in place – just. They will keep things in order until the shock is ready to be removed.

STEP 25
...While the front brake line brackets are best dealt with in the same manner as we did the backs. Mercy optional.

STEP 26
Now undo the nuts that hold the strut in from the top.

STEP 27
Knock the pins out that we left in place three steps earlier and the factory shock will fall out fairly easily. Note that again the trolley jack has been used to support the hub.

STEP 28
Fitting the front Tein Flex coil-over is quite similar to the rear. Lift the strut into place from underneath while a friend up top does up the nuts.

STEP 29
The guys at Tein were thoughtful enough to include an extension that allows the factory sway-bar to attach to the shortened strut. Attaching it is as easy as removing the original.

STEP 30
Next attach that 10mm bracket to the original line.

STEP 31
Use the jack to line up the hubs (the same as you did with the rear) and knock the studs back through. Make sure you do them up very tight, using a breaker bar.

The guys at Tein were thoughtful enough to include an extension that allows the factory swaybar to attach to the shortened strut

STEP 32
And you're done! How easy was that?

STEP 33
As we mentioned earlier, we're not lowering the car just yet. That'll come next, but with the coil-overs fitted it rides and handles far better than ever before. «

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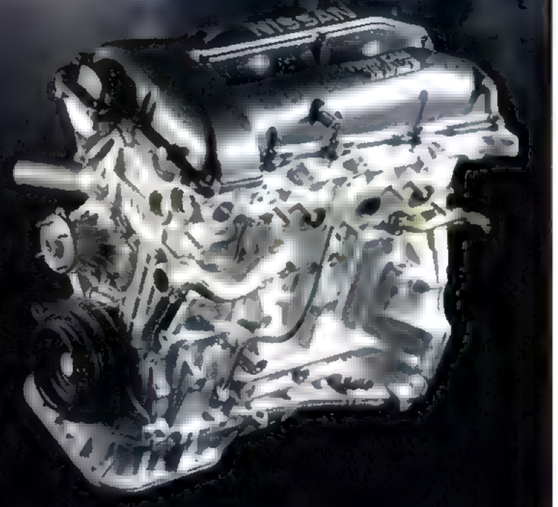

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Words: Kristian Appelt

While it's not hard to break the law in this situation, the point is importers shouldn't be forced into the position where they feel like they need to

Here We Go Again...

No sooner had I fired off my article on the Personal Imports Scheme to Roundy when I received another 'Did you know about this?'-type email from a mate who works at an insurance company. It seems the Department for Infrastructure has also been 'refining' the pre-'89 import regulations.

Prior to 2005, once cars reached 15 years of age they were able to be imported into Australia without any restrictions, which is why you'll hear many people in the trade refer to the '15 year rule'. The idea was enthusiasts could import and register their classic cars without making expensive modifications that would also ruin their cars' resale value later on.

By the time 2005 rolled around, there were a number of interesting Japanese cars hitting their 15th birthday – R32 Skylines (including GT-Rs), N14 Pulsar GTi-Rs, S13 Silvia/180SX, 'Series V' FD3S RX-7s, A31 Cefiros, C33 Laurels, JZX81 Mark IIs, SW20 MR-2s, even Honda NS-Xs, and with the floodgates effectively opened, the numbers of cars coming in under this rule skyrocketed.

There were no checks in place to ensure the cars were even okay for registration, and so in conjunction with the good stuff, Australia was swamped with a whole heap of old Japanese rubbish that was originally destined for the scrap metal yards.

Something clearly needed to be done to stem the flow, and so the Department of Infrastructure modified the '15 year rule' to become the 'pre-'89' rule. Rather than overseas cars becoming eligible for import once they reached 15 years of age, the new requirement was that they must have been built prior to January 1, 1989.

This allowed the true classic cars to still be imported, whilst cutting off many of the later model vehicles that were flooding the market. The pre-'89 rule will remain in effect until 2019, at which point it will become the '30 year rule'.

So, despite initial grumblings from importers when the changes were introduced, the pre-'89 rule has happily coexisted alongside the SEVS scheme and the Personal Import Scheme for the last five years or so.

So, rather than take an 'if it ain't broke, don't fix it' approach, the Department of Infrastructure has decided to make changes; changes that are, once again, ambiguous enough to leave most classic car enthusiasts once again scratching their heads at what is okay to import and what isn't. The changes described on the Department of Infrastructure's website are as follows:

"The pre-1989 scheme allows the importation of vehicles into Australia that were manufactured before 1 January 1989. The scheme is outlined under regulation 17 of the Motor Vehicle Standards Regulations 1989.

"However, if a vehicle has been modified or converted after original manufacture – so that the vehicle no longer meets original specifications – the date of manufacture is taken to be the later date of conversion.

"If the date of conversion is 1 January 1989 or later, the vehicle will not qualify under the pre-1989 scheme. One indication of a vehicle no longer meeting original specifications is where the vehicle acquires a different make, model or category."

At first glance, the people most affected by the changes are importers of hot-rods, who have been importing very old cars with late model engine conversions.

As you can imagine, the Australian Street Rod Federation and other similar groups are seeing red over the changes, especially given that, once again, the Department of Infrastructure failed to consult with the people most likely to be affected prior to the changes being introduced.

Hot-rodders are now forced into the ridiculous situation of having to provide evidence that the car they wish to import was modified more than 22 years ago or risk having their request for import approval denied.

Never mind that newer components may make their cars safer, more fuel-efficient and have lower emissions. Never mind that, in order to meet registration requirements, pre-'89 cars must still pass a variety of inspections and, in most cases, also get an engineer's certificate to document any modifications made.

But the changes to the regulations have implications for all importers of pre-'89 vehicles. By tossing in the word "modified", the Department of Infrastructure has cast doubt over whether any modified car can be imported under the scheme.

They discuss restorations being allowed on the website, but for a prospective buyer of a pre-'89 import, the question remains – how modified is modified? Will cars with engine conversions be rejected? Will cars with aftermarket suspension components be rejected? Will cars with aftermarket wheels or bodykits be rejected?

Bearing in mind that the car needs to be purchased before they can apply for import approval, it leaves importers in a catch-22 situation: they have to commit to purchasing a car and sending their money overseas before they can find out if their car is eligible for import.

The truly laughable side to the changes is that prospective importers are expected to prove that their car is un-modified and unconverted by simply providing a picture of their car with their application!

Has the Department of Infrastructure never heard of Google Image search? In other words, the people who were lying before about their cars will simply continue to do so, while those who are trying to do the right thing will be the ones affected.

So, while it's not hard to break the law in this situation, the point is that importers shouldn't be forced into the position where they feel like they need to. What truly has me incensed is that the regulation changes will now have otherwise law-abiding citizens lying about their cars to ensure that an import approval is granted.

In Japan, for example, any car purchased must be either transferred to the new owner's name or deregistered (ready for export) within two weeks of purchase. As I've explained in previous columns, re-registering a car in Japan is very expensive, making cars with plenty of registration far more desirable and expensive to purchase than those without.

Even if the import approval is applied for the day the car is purchased, the turnaround time from Canberra is at least three weeks, so there's no way the buyer can know for sure whether a car has been approved or not before having to deregister the car.

Of course, if the import approval is denied, the car must go back through auction without any registration, meaning losses usually totalling in the thousands of dollars. Lie about the appearance of your car, or lose a bucket-load of money? It's not too hard to guess which way people will jump when backed into a corner... «

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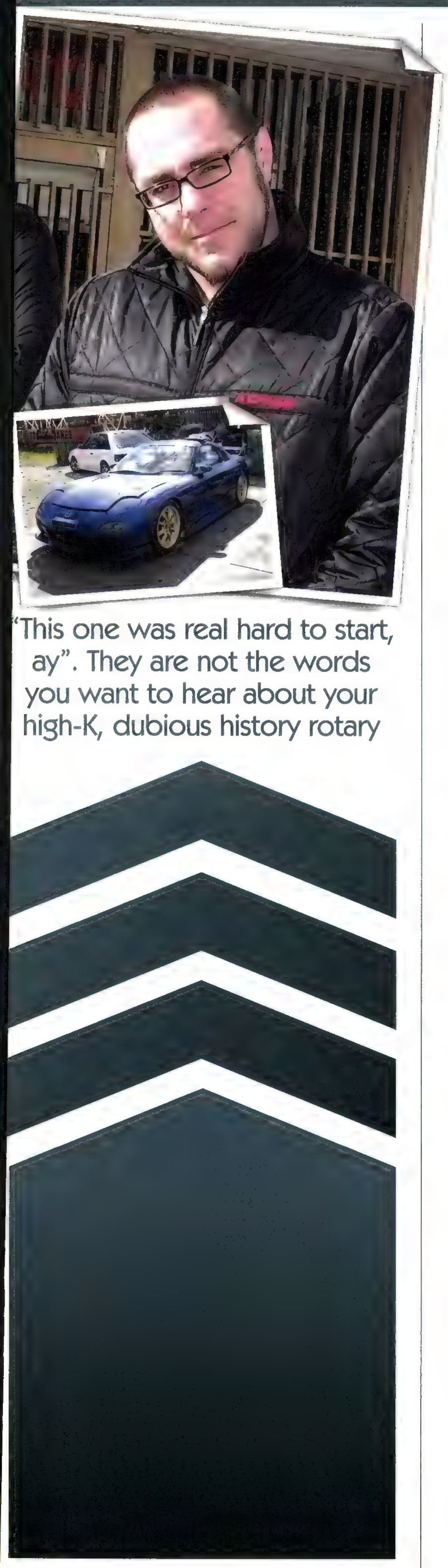
The FD – Part II



"This one was real hard to start, ay". They are not the words you want to hear about your high-K, dubious history rotary

About a week ago I sat here at my desk looking down the street to see if the truck carrying my boat-fresh FD from J was coming. I still find it a thrill to see my new car come down the street on a flat-bed, the examination of the new purchase, driving it for the first time – that quaint Jap fresh smell that's a combination of J cigarettes, air fresheners and something else that I can't quite put my finger on.

I had seen the FD on the wharf the day it had rolled off the boat, from the window of a passenger train, for a fleeting second. Nose pressed up against the glass, I swear my heart skipped a beat. It wasn't always like that, though.

Back in the days before 9/11, after showing some ID proving who you were and quoting your shipping doc numbers, you could get onto the wharf. Terrorists? In Perth? Not f*cking likely. I mean it's still highly unlikely, but thanks for f*cking it up for me, Osama. Wanker.

Anyways, back in the heady days of boats full of used cars from Japan, it used to be quite the adventure checking out your cars, and everyone else's on the dock. I used to drive down to the wharf at all hours of the day and night and check out the latest stock. Halcyon days.

Anyways, back to the boat-fresh FD. I spoke to my good rotary friends, Undy and Rob Mitchell, about what sort of pre-use loving I should lavish on the FD given it probably hadn't been used for a couple of months, and I had a sneaking suspicion it had seen a lot of track time in its days.

"Well, you should take the inlet manifold off and squirt not one, not two, but three drops of oil directly into each chamber and rotate 12 times under a full moon."I paraphrase, but it was something of that order. I swear owning a rotary is like having a gremlin. "Don't feed it non-premixed fuel after midnight." FFS.

I then informed them that chances are it would have been cold caned off the boat by those nice men on the docks (Word from the wise, don't ever watch your new pride and joy being driven off a boat). "Oh," they reply. "Just let it idle 'til the smoke clears." Great.

I spot the truck rolling down the street and virtually run outside to watch it roll off. The truckie says to me, "This one was real hard to start, ay". They are not the words you want to hear about your high-K, dubious history rotary.

I lean in to give it a start – nothing. I get the jump pack, kick it in the guts. It struggles into life, on one rotor, coughing and spluttering. Oh dear.

Remembering an earlier conversation I'd had with Mitchell about sticky rotors, I left it to idle. After about a minute, the second rotor coughs into life and then the smoke starts. It reminded me of a Year 10 social, or one of those burning oil wells in Gulf War v1.0. Oh dear, again.

After about 10 minutes of looking like it was on fire, the smoke clears and it settles down into a normal-ish 13B rump-rump idle. I say thankyou, lawd.

Inspecting the basically stock engine bay, I notice that the dreaded plastic air separation tank is already starting to weep. The AST is one of the banes of FD3S. It's basically a little plastic tank that is meant to separate the bubbles out of the cooling system at its highest point.

Mazda made them out of plastic, which is alright if they are new. Five years down the track, they start failing. Given mine is a '99 and I'd seen in the pictures I got from J that it still had the plastic tank, I'd already ordered an RE-Amemiya replacement alloy one, which was lucky. There are plenty of stories of new Australian owners taking their Jap FD for a spin and having the AST fail, dead chicken rotisserie.

Doing a walkaround of the FD, it's basically in really sound nick. The M Sports side skirts have to go, and the body colour front lip needs to be returned to its original black, but apart from that it's pleasingly free of dents and scratches.

The presence of well used RE-01R R Comps confirms my FD's track time, as do the harness bolts behind the rear seat. No matter, babied rotaries die just as easily and as often as ones that have been caned. As someone on one of the rotary forums said, chances are your 13B-REW will die. Just get used to the idea that you will need a rebuild at some stage – much like someone buying an R32 GT-R on its original engine in 2010.

I've already started thinking about what I need to make the FD look how I want it. The standard Series VIII rear wing has to go. I need some of those nice carbon Fujita Engineering side skirts and an RE-Amemiya rear diffuser and one of those nice Origin low carbon wings. Yep, sorted.

The end of the day comes and it's time for the trade plate first drive home. I squeeze myself in. The FD is tight, tight like prom night, and I'm not that tall. Everything falls beautifully to hand and just feels right. I roll to the Rosie Girl's for some dinner. Everything is running nicely, temps are good and stable, sus is a little stiff, but it's adjustable. Tyres are a little square, but getting changed anyway.

After dinner, I was going to take it for an extended non-threatening drive on the freeway to un-stick that rear rotor, only it won't restart and the jump pack is dying. Cue the Rosie RX330 with jumper leads and the jump pack.

Finally, I get it to restart, on one rotor, and again with the smoke screening. It goes on for quite some time, and I'm waiting for someone to call the fire brigade. I decide that rather than risk an extended run on the freeway with a recalcitrant rotary, I'll take it back to work.

On the way back to work the FD decides it's happy again and wants to play ball. I decide that what the heck, it's been a while since I waited on the side of the freeway for 'Gerrin The Supertowie' and take the on-ramp to the freeway. The FD cruises beautifully. Sitting *cough* on the speed limit, the temps go down even further and it's just glued to the road.

After an hour on the freeway and a narrow avoidance of a chat with some plod in an unmarked 'Wrecks', I have the FD back at the workshop. It's purring like a kitten and very happy, as am I. I've heard all the horror stories, and to be perfectly frank, I'm a little wary of the FD myself, but just that one night has endeared it to me.

It's scalpel sharp, the steering is alive in your hands and it communicates every little nuance of the road directly to you. I think my heart skipping a beat was right on the money. I'm in love.

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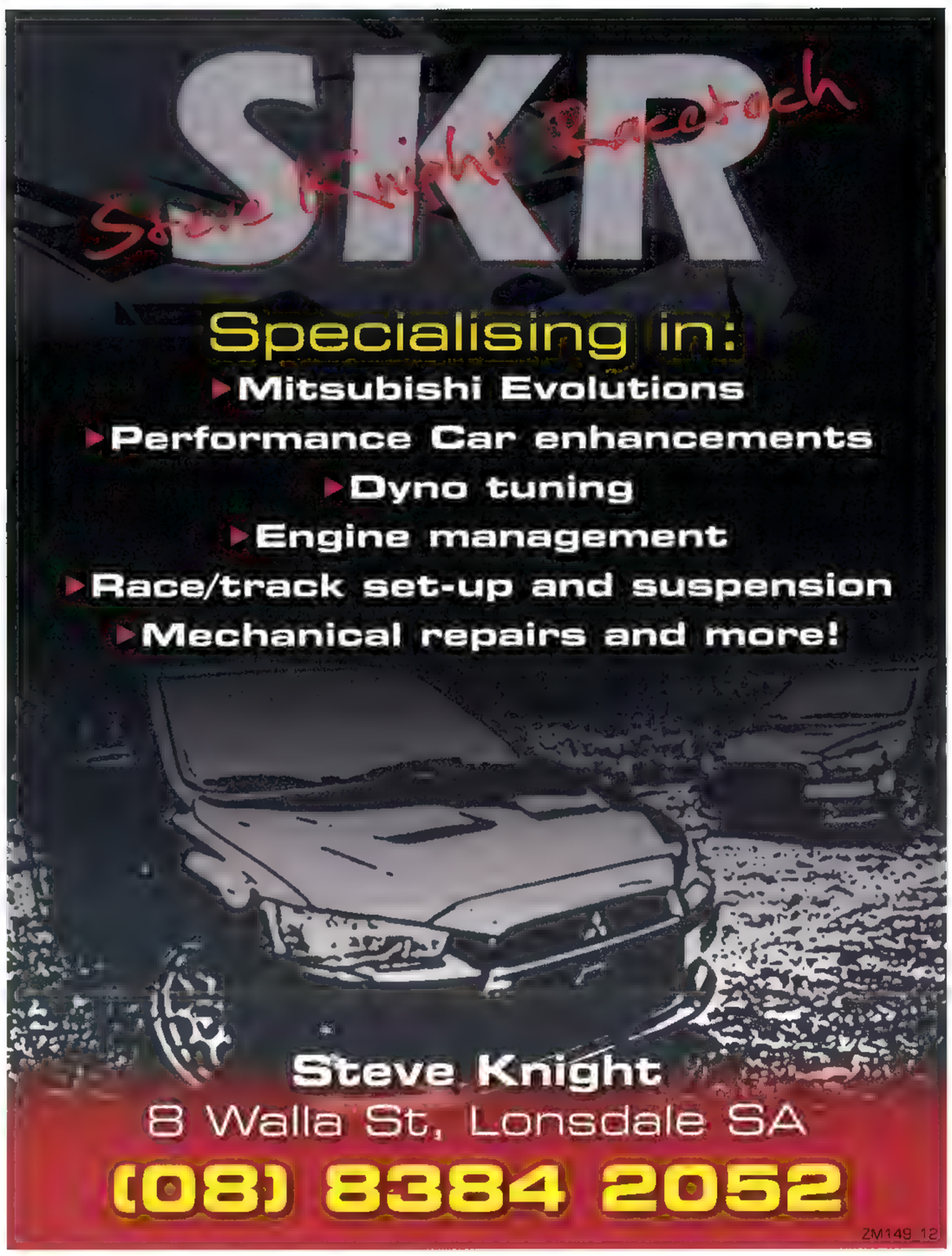
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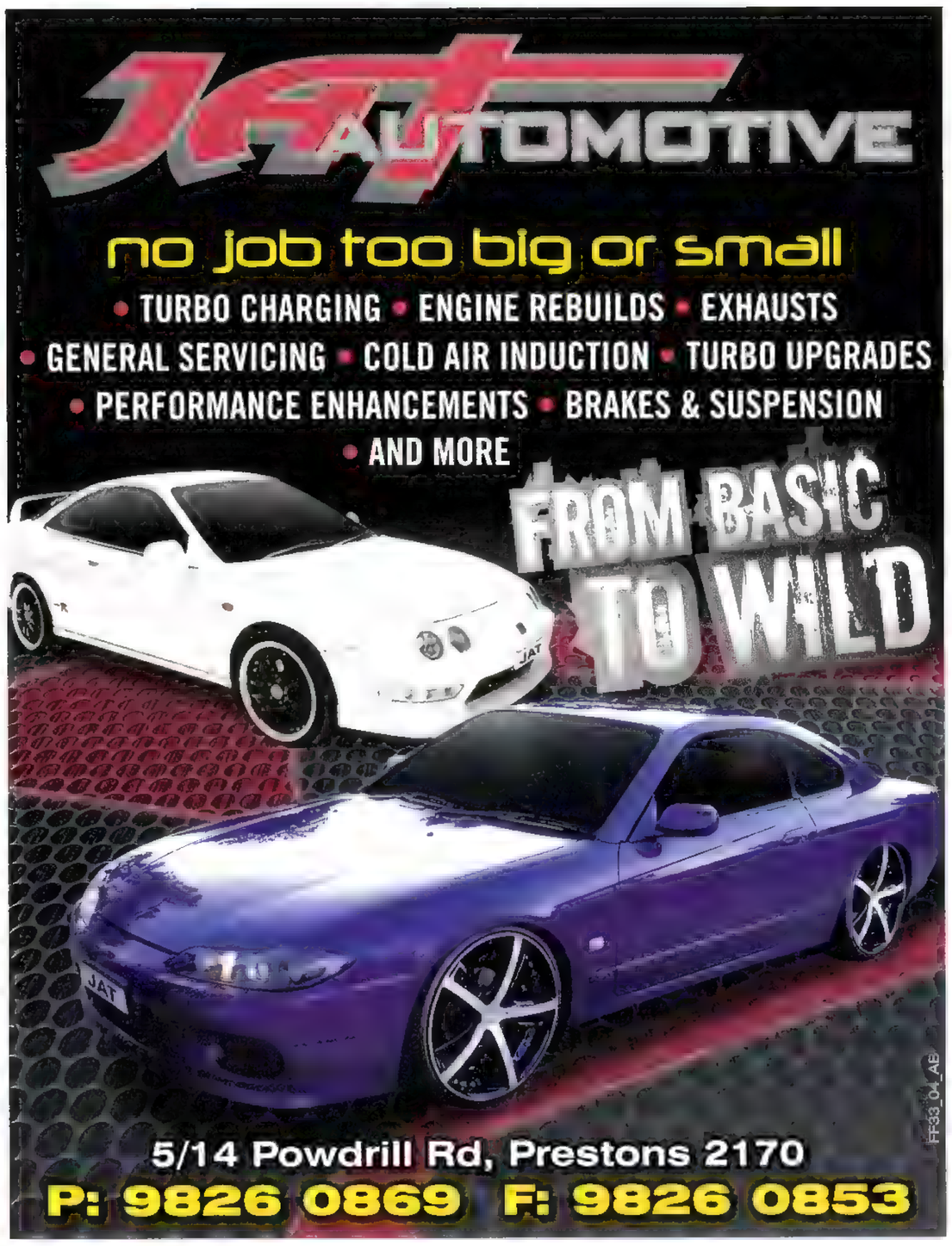
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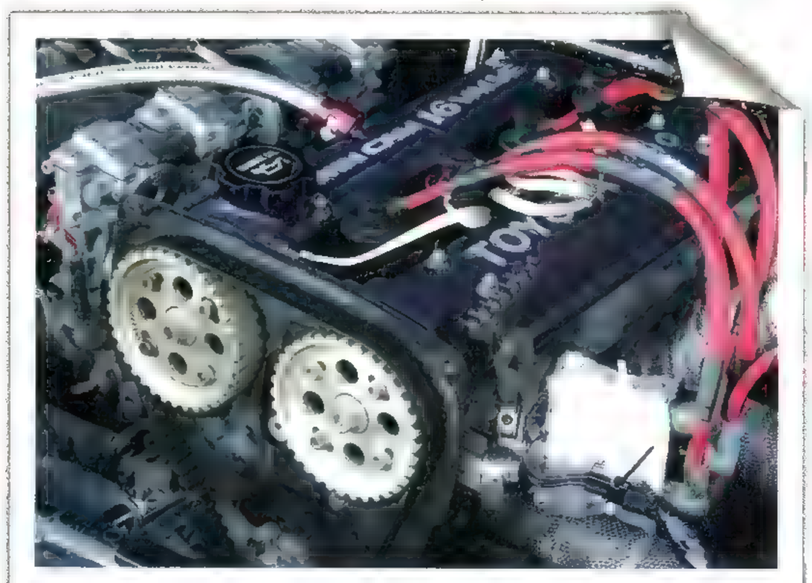

Dear PI,

I have a quick question for you. I have an AE71 with the stock motor and I'm trying to track down a 4A-GE engine with little luck. Could you please steer me in the right direction on finding one of the engines? Can I still use the stock gearbox? How much would it cost if I do all the labour myself, and is there anything else I'll need for the swap? Thanks for any help you can give me.

John – via email

A scout around some of the advertisers in the magazine – ie. those who import engines, front-cuts and spare parts – should track you down a suitable 4A-GE engine, and it seems that $1200–1500 will get you a decent 16-valve 4A-GE with plenty of life in it (and some warranty too perhaps), either from current stock or imported especially for you. Early 4A-GEs are getting a bit long in the tooth these days, so sourcing a used motor privately via the plethora of Toyota online forums can be a good method as well.

While it does pay to keep an eye out for a RWD version of the 4A-GE engine so as to avoid having to sort out the rerouting of coolant plumbing that becomes necessary when using a FWD 4A-GE motor in a RWD application, a later model 20-valve FWD 4A-GE may actually be the better option if you can afford one, as you're getting a newer motor that makes more power and is much the same to install into your AE71. It isn't too difficult a job by any means.

You can retain the AE71 T40/T50 gearbox, as the AE71's driveline will easily accommodate a change to the 4A-GE engine without having to alter much at all – a new clutch would be a good idea here basically, but that's about it.

As you'll be converting to a 4A-GE with electronic fuel injection, you'll need the engine's EFI wiring set-up (ECU, engine loom, ignition system, etc.) and a change in fuel pumps to an EFI-friendly unit and various assorted bits and pieces such as EFI-rated fuel hose, hose clamps, etc.

It's a good idea to run this conversion past your local transport authority as, depending on such things as the age of your car and donor engine, they may have a few requirements for you to abide by to ensure 100-percent legality for street use.

This sort of conversion could probably be done for just over $2000 if things go your way, but I'd budget for $3000-4000 all-in, as you're bound to change things like the exhaust manifold and exhaust for a better set-up, stuff like that.

Dear PI,

I own an R32 GT-R Nissan Skyline and I've recently upgraded my front brakes to AP six-pot calipers. As I do not have a race team's budget, I was wondering if I can put the standard front (four-pot) GT-R calipers on the rear. I understand I may have to manufacture some mounting brackets.

Phill – Newcastle, NSW

I investigated this option several years ago, and it doesn't look like it'd work too well at all. You'll lose the existing handbrake set-up, need some pretty complicated/convoluted adaptor brackets to mount the calipers and you're a bit tight for space in terms of clearance around the hub area. Some calculations showed the bias wouldn't be ideal either, not nice.

Although the rear brakes on a GT-R do a bit more work than most people think, some simple upgrades to the pads, decent rotors and properly bled quality brake fluid are usually more than up to the task.

Changing to the slightly larger R33 Brembo rear calipers would be the next step up and offer a worthy upgrade at a sensible cost if you do brake hard enough and often enough to really put your front AP six-potters to good use and to the point where you'd benefit from better brakes in the rear.

Dear PI,

Hey gents, I'm hoping this is the right spot. I've been meaning to do this for some time, but you know how things get!

Anyways I thought I would write to you about my R32 GTS-t that I've had for going on six years. I know you probably receive thousands of these, but I thought I would try my luck.

My car started off life as a black RB20 making about 169.7kW, but who's counting? It was a big step up from the Suzuki Baleno that I was carting around before. But that was Mum's (and manual). The bug, however, firmly took over and the wallet has never felt lighter.

I had been thinking of building an RB30 given they are all the rage, and a good friend of mine has a '32 with one that just makes a lazy 310. Damn 3Ls! But a little more research and a brief chat to the engineer promptly squashed that idea. So, I settled for an RB25, which had been having good results on the forums.

I was also a little bothered by the paint, so that changed to VW R32 deep pearl blue. That was probably a bigger shock than the motor swap. I figured while I was there I would pop on a GT-R bar, as I already had the GT-R bonnet.

So, with all that done it was off to the engineer, which was a breeze, and now I have a legal R32 with an RB25 that makes 220rwkW at 1bar thanks to Nistune and a Z32 ECU. Dr Drift and Matt are to thank there.

The car's also got the usual stuff and an HKS 2530 that was on the old RB20. I also decided on having the RB25 box as I had bought an entire R33 donor car. It's got Koni shocks and A'PEXi springs, blah, blah, blah.

So, essentially, the Nistune stuff is as follows:

- It's a Type 2 board used in conjunction with a 300ZX ECU. I have a twin-turbo auto ECU running mine. It doesn't really matter which one you go for.
- The wiring changes are very basic and I got Matt (Nistune owner) to do all the changes and swap the daughterboard, as electronics aren't my strong suit.
- It is a straight plug-in ECU once Matt is done with it.
- I'm running an R33 loom to retain VCT (Some guys are setting up external VCT controllers and running with RB20 ECUs).
- You simply plug in the PLMS (via USB) cable into your consult port. Then it provides real-time tuning and map tracing, etc, as well as having consult functionality.
- You can get all engine diagnostics by simply plugging into your consult port. There's a pretty neat gauge set-up on there. It will also indicate if the ECU is throwing a fault code.
- Tuning-wise, it will support pretty much anything you will need for a daily.

On top of that, you have Matt to pester with questions, and he has been terrific in helping. The program is always evolving also.

For the price, it really can't be beat, the board is only <$350 installed and ready to go if you get them to do all the work. You can also buy the software and tune/consult yourself for another $300ish.

Overall, I think it's terrific. I have a tuned car that runs like a factory car – cold start, no rough idle, no stuttering, etc, etc. Also, it looks like the standard ECU if I ever questioned by the men in blue.

Anyway I have attached some pictures and it would be so awesome to show everyone what will surely be my pride and joy until the doors fall off and petrol is $5 a litre.

Would love to hear from you and I can provide plenty more pictures if you want them. Hope to hear from you soon!

Steve – via email

It's a pity really that people are so obsessed with EMS systems of old that they fail to see just how good, and cost-effective some of these newer systems on the market can be, such as the Nistune set-up discussed. Never listen to people who have not used something directly. My mate's brother's mum's friend's opinion counts for absolutely nothing in the real world.

We have seen a few Nistune boards being run in some big-power builds, so hopefully they'll pick up some steam, and a dedicated RB25 board is in the works too, apparently.

Nice car, Steve, by the way.

Borrowed from the VW MkV R32 Golf, you've got to admit this blue looks pretty good on the '32

Dear PI,

First off, top mag. I'm learning a lot from it. I own a Toyota Corolla Seca AE92 SX model. I'm on my green Ps and can't have turbo or superchargers. It's running the 16V 4A-GE small-port motor at the moment, but I'm currently building a big-port engine with 20thou' oversize pistons, shaved head, a bored, decked and honed block, and I have also deburred the exhaust and intake ports and the block.

I'm hoping to run quad throttle bodies off of a silver or blacktop 20-valve 4A-GE engine. Where could I get an adapter plate from? Will I need an aftermarket ECU? If so, what kind and how much? Bear in mind I am trying to keep the cost down.

If I can't get the quad throttle bodies I was looking at a set of Crower cams. Also, what other suggestions would you recommend to enhance the power, as I haven't seen many articles on 4A-GEs in this magazine?

I'm hoping for about 130hp at the flywheel if possible. If not, I'd like to see at least 100hp at the wheels. It's running a 2.25in system from the cat-back to a Lukey Performance muffler and dump tip. I will be getting extractors for it when I put this motor in.

Also, can you give me any info on the 7A-GE motor or a 4A-GE stroker motor, because I'm looking to build one when I finish this build using my small-port head and the 7A-FE block and parts I have at home to put in an AE71.

Cameron – Westbrook, QLD

A set of quad throttle bodies from a silver/blacktop 20-valve 4A-GE aren't even close to being needed until you have a fairly serious 4A-GE with a lot of internal modifications making at least 180hp-plus. Your standard induction setup will be fine. However, if you want to fit the 20-valve's quad throttle bodies to your big-port (TVIS) 16-valve head – and I don't blame you, they sound fing awesome – then an aftermarket adaptor plate like the Techno Toy Tuning offerings (or a locally sourced equivalent) are hard to go past.**

You'll definitely need an aftermarket ECU (both to make it run if you do go for the quad TBs and to make the most of other modifications) and you have plenty of choices here: Adaptronic, Megasquirt, Microtech, EMS... the list goes on and on. Go for one your chosen tuner has experience with and be prepared to part with at least $1000 if you go for the cheapest ECU, installation and dyno/tuning time and more if you go for a more expensive ECU.

A set of racier camshafts, as much headwork as you can afford and a nicely matched exhaust manifold will really make your 4A-GE come alive – easily enough for a FWD platform in your AE92, that's for sure. If you want to delve inside the motor, then focusing on upping the compression ratio and some sensible changes like uprated rod bolts will make even more power and make the engine more reliable without the need for something like a 4A-GZE bottom-end.

When it comes to a '7A-GE' motor, a hybrid of a 7A-FE bottom end and a 4A-GE cylinder head, my favoured option is to use the stock 7A-FE bottom-end and any suitable 4A-GE head and add forced induction into the mix.

The end result is a torquey and responsive motor that's great for a street car and will live a long and happy life if you treat it well and are content with keeping the revs below 7500rpm or so. If you yearn for crazy revs, then you're rapidly moving into the territory where internal modifications are numerous and expensive, but worth it.

The problem with such hybrid engine builds is that there are quite a few little bits and pieces that need to be changed/altered/tweaked to fit a 7A-FE-based engine into something like an AE71. Some bolt holes will line up and others won't, exhaust/intake/cooling pipework will need adjusting to suit the 7A-FE block's different dimensions – that sort of thing. If you can make the necessary changes yourself, then there's little to be concerned with, but it'll add up to significant labour charges if you can't.

Dear PI,

I am writing to you in regards to a major flaw in the anti-hooning legislation I've recently discovered myself.

Please have a read through my story in this link here: www.facebook.com/pages/Petition-for-Anti-Hoon-Legislation-Amendment.

What I've discovered is that this law basically allows the police to impound and eventually seize cars to be sold off based on 'defects' alone without the actual hooning.

You could be on your way to the local corner shop and if you're pulled up and defected they can send you to court over an insignificant matter such as a BOV or something similar. It's a good use of taxpayers' dollars here, no?

What's worse is you're treated as if your a criminal, convictions are actually recorded against your name for these 'defects'. Since the 'defects' are recorded against your name, any car you drive in the future will be eligible to be impounded/seized depending on which strike you're at if any other 'defect' is found.

I was outraged when I discovered this. I had always thought the anti-hooning laws were there to stop the silly behaviour on our roads, but apparently it has a major flaw that allows police to enact it to brand responsible car enthusiasts not actually doing any sort of hoonish act as hoons. I was so outraged I've already started a petition both online and by good old-fashioned signatures to get this part of the law amended so it works the way it was meant to.

The reason I'm writing to you is to possibly run an article to make more people aware of this flaw in the legislation. I'm sure every single driver there that owns an import or modified car of any sort will not want to see their car taken away from them just for minor and insignificant matters that can easily be rectified.

Binh Tran – via email

PS: I own a JZA80 Toyota Supra with BPU.

The hoon legislation has been a very hot topic amongst enthusiasts, and with good reason. We were not aware of the above, but it would be worth investigating, as there should be a clear distinction between defects and hoon behaviour. They are not one and the same.

We here at PI still believe the bulk of taxpayer money should be poured into teaching new drivers how to control a car instead of simply following a numbered sign. Useful and effective driver training is the key.

If you have any feedback on this topic, let us know via jason@hpi.com.au.

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R32 Skyline GT-R	RB26DETT	2568cc	Garrett	No	M/T 255/55R16	8.746	1.4	158	Wllbnk	Theo Woollett	Theo Woollett Racing	2
R32 Skyline GT-R	OS RB30	2996cc	T67-25G x2	No	M/T 275/40R17	8.899	1.467	160.89	AIR	Kier Wilson	Willall Racing	3
R33 Skyline GT-R	OS RB30	2996cc	GT2835R x2	No	Nitto 275/40R17	9.45	1.48	151.25	AIR	John Munro	Tilbrook	4
R32 Skyline GT-R	RB26DETT	2568cc	HKS T51R SPL	No	M/T 255/50R16	9.457	1.36	142.70	Wilbnk	Paul Diemar	Godzilla Motorsport	5
R32 Skyline GT-R	OS RB30	2996cc	TD06-20G x2	No	M/T 275/40R17	9.69		149.8	Hthcte	Kurt Wilson	Willall Racing	6
R32 Skyline GT-R	RB26DETT	2568cc	GCG x 2	No	Yoko A048R	9.78	1.54	143	Wllbnk	Mark Berry	Hi-Octane/CnJ	7
R32 Skyline GT-R	RB26DETT	2568cc	TD06-20Gx2	No	M/T 255/50R16	9.81	1.485	144.09	Wlbnk	Roger Garcia	Coastal Dyno & Perf.	8
R32 Skyline GT-R	RB30/26	2996cc	GT3037S x2	Yes	M/T 255/50R16	9.95	1.676	147.3	WSID	Paul Mouhayet	Self/C&V Performance	9
1996 Subaru WRX	EJ20	2457cc	Garrett	No	BFG 225/45R17	9.963	1.724	149.02	Wlbnk	Errol Brittain	Flat 4 Performance	10

4WD UNDER 2400CC

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
Lancer Evo II	4G63	1997cc	GT35R	Yes	BFG Drag 235/60R15	9.67	1.48	147.3	Wlbnk	Rob Barac	APC	1
CC Lancer GSR	4G63	1997cc	GT3540	No	BFG Drag 215/45R17	9.81	1.51	143	AIR	Simon Podlewski	Morpowa	2
Proton Satria	4G63	1997cc	GT35R	Yes	M/T 235/60R15	10.08	1.6	140	WSID	Joseph Maiorana	Self	3
1998 Lancer GLXi	4G63	2158cc	GT3540	No	Toyo RA-1 225/45R17	10.195	1.739	138.24	Kwinana	Silvio Commisso	Speedworks	4
1992 Subaru Brumby	EJ20	2136cc	T61	Yes	Azenis 215/45R17	10.41		138	Hthcte	David Khoury	Tony Rigoli	5
1999 Subaru WRX	EJ20ET	2197cc	T62	Yes	Falken 225/45R17	10.48	1.975	141	Wlbnk	J. Montesalvo	Tony Rigoli	6
Subaru WRX	EJ20	1994	APS SR50	Yes	Falken ST115 215/40R17	10.762	1.64	127.03	WSID	Fardie Nahas	Croydon Racing	7
Subaru WRX	EJ20	1994cc	GT35	No	Falken 225/40R17	10.81		135	EstnCk	Bakker Arja	V&E Rigoli	8
1997 Subaru WRX	EJ20	2356cc	T66	No	Azenis 225/40R17	10.892	1.876	141	EstnCk	Brian ElHassan	Tony Rigoli	9
CC Lancer GSR	4G63	1997cc	GT30	No	Falken 225/40R17	10.95	1.82	128	EstnCk	John Tripodi	V&E Rigoli	10

RWD OVER 2400CC

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
1974 KE20 Corolla	2JZ-GTE	2997cc	Pro 88-GT	No	M/T 275/50/15	8.57	1.34	164.5	Wlbnk	Scott Hoffman	Cleveland Exhaust	1
1991 Cressida	1.5 JZ-GTE	2997cc	GT42	Yes	M/T 255/50R16	9.36	1.501	157	Wllbnk	Shane Crichton	Blacktrack Performance	2
Mazda MX5	13B	2616cc	GT51R	Yes	M/T 235/60R15	9.88	1.432	134	WSID	Lee Docherty	NFSRacing/Rocco's	3
JZA80 Supra	2JZ-GTE	2997cc	T88H-38GK	No	BFG 295/50R15	10.04	2.23	150.3	Wllbnk	Carlos Novais	Millennium Motorsport	4
R33 Skyline GTS25t	RB25DET	2498cc	ATP600	No	M/T 255/50R16	10.12	1.64	136.6	Calder	Ryan Quinn	ATP/Bresciani	5
JZA80 Supra	2JZ-GTE	2997cc	GT42R	No	M/T 275/50/15	10.24	1.66	135.22	Hthcte	Joel Goodall	Self	6
Nissan S15	RB25DET	2498cc	GT35	No	M/T 255/50/16	10.33	1.52	133	WSID	Peter Vozzo	Don't Spin Racing	7
JZA80 Supra	2JZ-GTE	2997cc	T88-34D	No	M/T 255/50R16	10.419	1.683	138.08	Wllbnk	Matthew Le Grand	GT Auto Garage	8
R32 Skyline GTS25t	RB30/25	2998cc	GT4049	No	M/T 255/50R16	10.449	1.71	135.41	Wllbnk	Ryan Acworth	Mercury Motorsport	9
JZA80 Supra	2JZGTE	2997cc	T88-34D	Yes	BFG Comp TA 275/75R15	10.46	1.66	131.3	WSID	Nabil Morcos	C&V	10

RWD UNDER 2400CC

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
1973 Datsun 1200	SR20DET	1998cc	GT3040	Yes	M/T 235/60R15	9.79	1.397	136.7	Wllbnk	Michael Silk	Self	1
1969 Datsun 1600	SR20DET	1998cc	GT30	No	M/T 235/60R15	9.89	1.459	131.23	Wilbnk	Mick McGregor	Competition Tuning	2
S14 Silvia	SR20DET	1998cc	T60	No	Hoosier 255/50R16	10.11	1.44	137	WSID	Ryan Blank	Self/CTP Motorsports	3
S15 Silvia	SR20DET	2100cc	T51R-KAI	Yes	Hoosier 275/50R15	10.121	1.416	121.91	AIR	Theo Spartalis	GT Autosound	4
S13 Silvia	SR20DET	1998cc	GT3037S	No	M/T 255/50R16	10.457	1.705	137	WSID	Paul Torony	Advance Motor Mechanics/JEM	5
S13 Silvia	SR20DET	1998cc	GT3582R	No	M/T 255/50R16	10.506	1.644	139.36	Willowbank	Trent Whyte	Mercury Motorsport	6
1974 KE20 Corolla	SR20DET	1998cc	GT35	No	M/T 235/60R15	10.539	1.590	131.23	Hthcte	Michael Kalaitzakis	Self/Race Fab	7
1988 MR2	4AGZE	1595cc	GT30	No	BFG Drag 225/60R15	10.66	1.69	131	WSID	Ben Sindjelic	Groove Ryder Fabrications	8
180SX	SR20DET	1998cc	Turbonetics	No	MT 255/50/16	10.99	1.487	123	Willowbank	Ryan Blank	Self	9
Datsun 120Y	RB20DET	1998cc	GT35R	No	M/T 205/50R15	11.08	1.54	118	Willowbank	Steve Roscarel	Self/Kev Rowley	10

FWD

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
Swift GTi	G13B	1370cc	GCG	Yes	Toyo R888	11.247	1.987	135.00	WSID	Dave Homer	DMW Motorsport	1
97 Civic VTiR	B16A	1595cc	Hypertune	No	BFG 225/50R15	11.418	1.962	134.04	WSID	Ben Creswick	Hypertune	2
Pulsar SSS	SR20DET	1998cc	GCG	No	M/T 225/50/15	11.43	2.082	130.32	Wilbnk	Rowan Armstrong	Godzilla Motorsport	3
Starlet GT	5E-FTE	1331cc	VF22	No	M/T 205/50R15	11.599	1.847	121.51	Wilbnk	Trent Gillespie	Blacktrack Performance	4
1985 Civic	K20A	1998cc	None	No	BFG 215/60R14	11.676	1.732	116.55	Wllbnk	Glenn Alcorn	GRP Automotive	5
1995 Civic	B18A	1796cc	GT3040	No	M/T 235/60R15	11.758	2.035	124.00	Wllbnk	Luke Ryall	Hi Tech Modifications.	6
1996 Civic	B16A	1595cc	GCG	No	BFG 225/50R15	12.016	2.117	128.41	WSID	Ben Creswick	Hypertune	7
1991 Civic	B18CR	1796cc	HKS GT35R	No	Toyo T1r 205/55/15	12.113	2.03	123.97	Wilbnk	Jimmy Luu	TeamPov	8
1992 Starlet GT	5E-FTE	1500cc	GT28	No	Azenis 205/45R17	12.120	1.987	119.44	WSID	Nick Vassiliades	Tony Rigoli	9
1991 Lancer GSR	4G63	1997cc	TD06-20G	No	BFG drag 225/50R15	12.120	1.984	115.02	WSID	Robert Anderson	Millennium Motorsports	10

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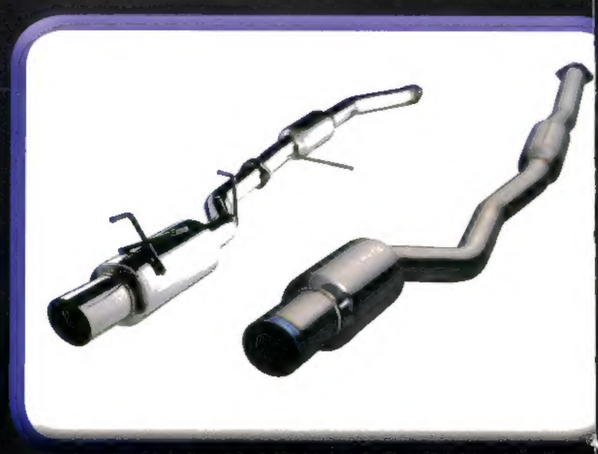

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